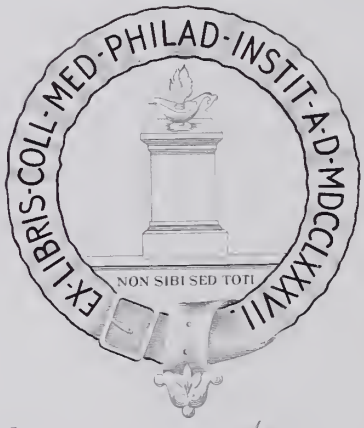
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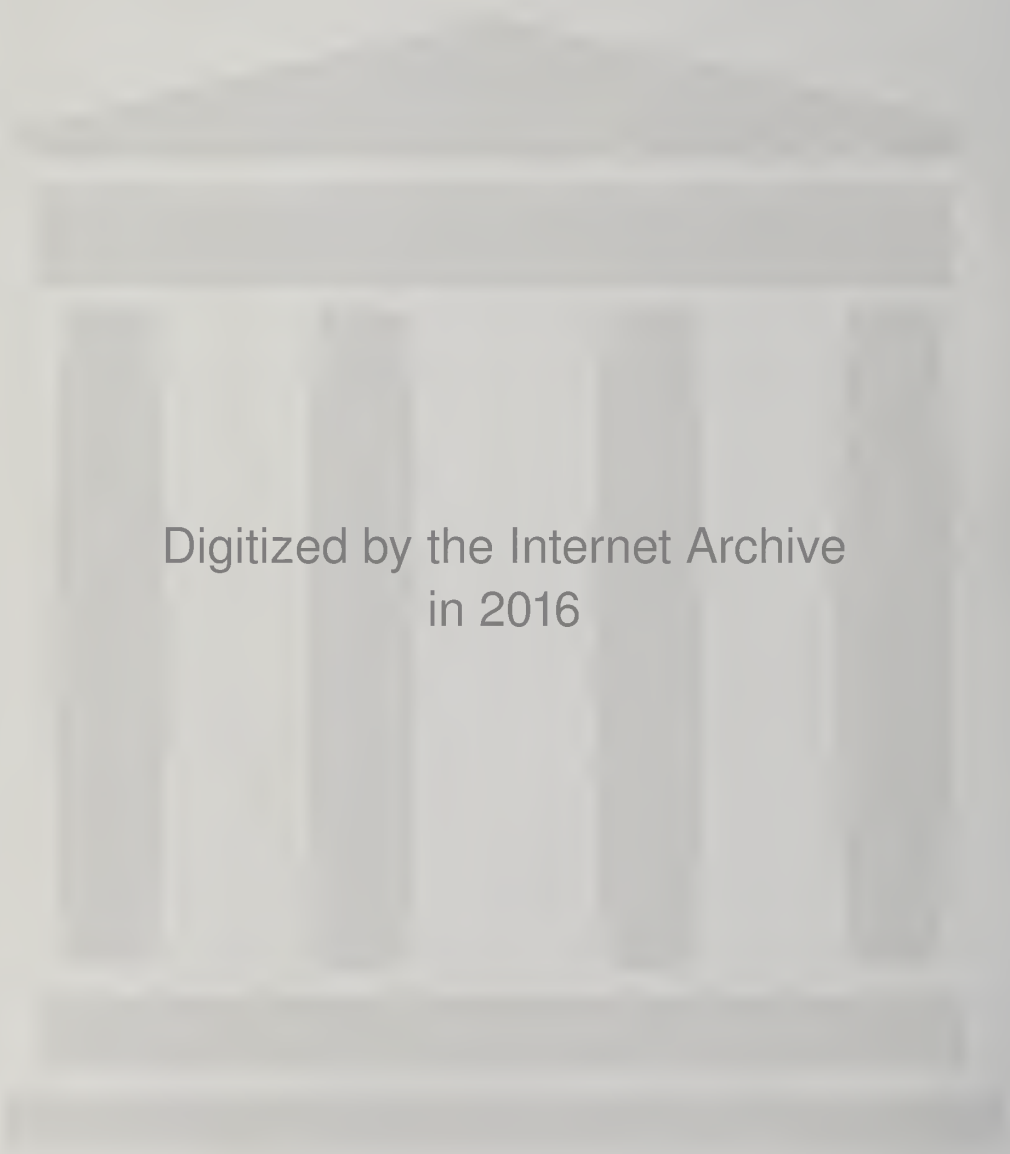


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The Journal of The KENTUCKY Medical Association



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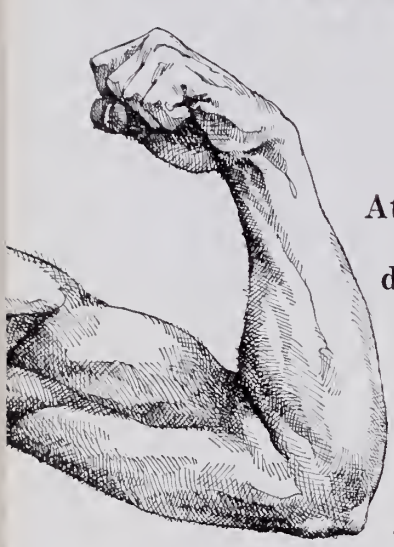
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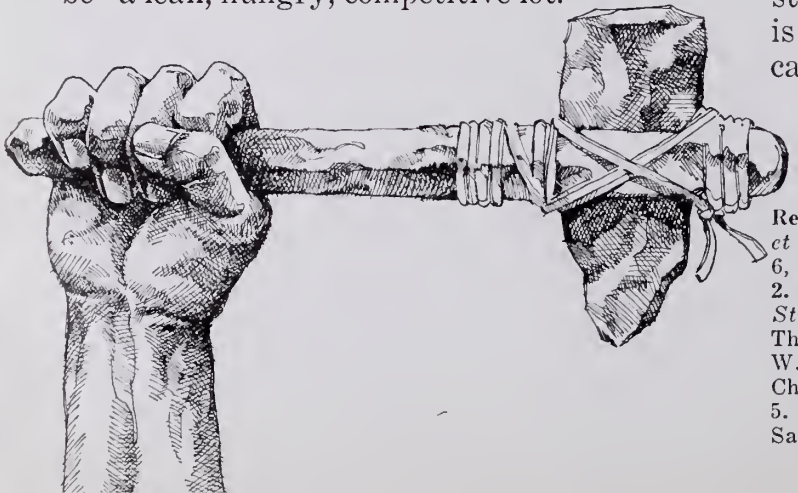
IF MORE MEN CRIE



At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



Big boys don't cry. If more men cr maybe fewer would wind up with duode ulcers. But men will be men—the sum tota their genes and what t are taught. Schottsta observes that whe mother admonishes son who has hurt him that big boys don't cry, is teaching stoicism.[4] Crying is negation of everyth society thinks of as ma A boy starts defending manhood at an early

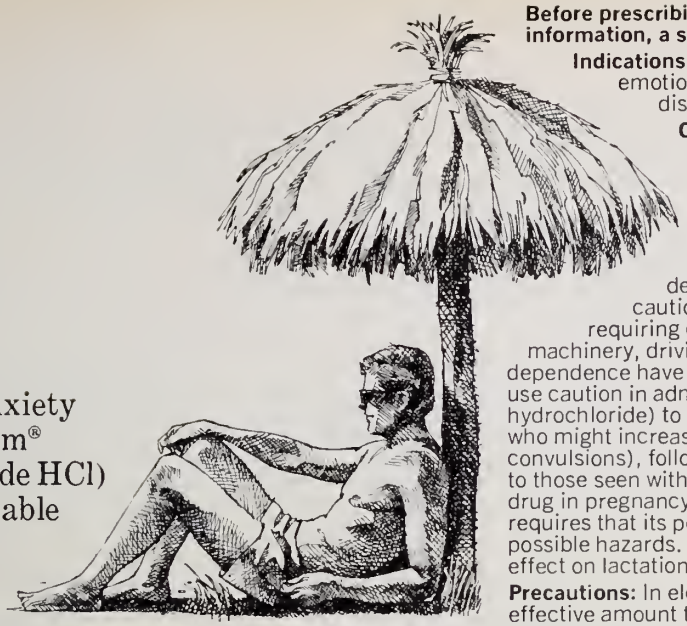


Take away str you can take away sympto

There is no question that stress pla role in the etiology of duodenal ul Alvarez[5] observes that many a man wit ulcer loses his symptoms the day he shut the office and starts out on a vacation. problem is, the type of man likely to hav ulcer is the type least likely to take l vacations or take it easy at work.

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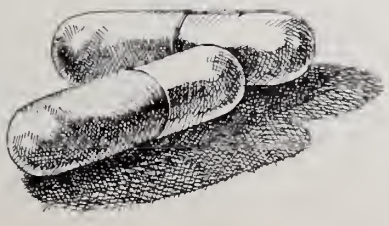
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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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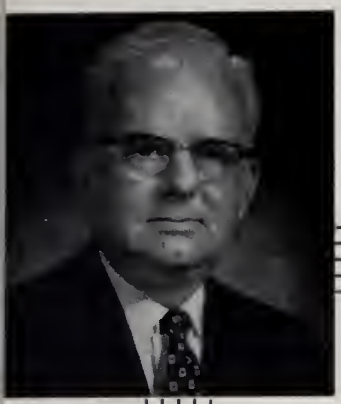
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MESSAGE FROM THE PRESIDENT

I CONSIDER it a privilege to be permitted again to contribute to the President's Page and am gratified that this contribution can be dedicated to the Kentucky Foundation for Medical Care, Inc. The full operation of the Foundation, I think, will mean the realization of an avenue to total health care improvement not possible heretofore.

During November, Incorporators of the Foundation met and held an informal meeting to discuss goals and methods for their accomplishment. Among those original objectives discussed were proposed activities in the areas of peer review, health care delivery, health manpower and placement, health insurance standards, medical education, and medical malpractice problems. Committees were proposed to pursue these problems, and prospective committee members have since been contacted. Although many of the functions recommended for inclusion in the Foundation are currently being performed by present KMA committees, it was felt that their operation under the Foundation's umbrella might allow greater expansion and broadening in scope.

Where KMA is the scientific voice of organized medicine, the Foundation is envisioned as Kentucky medicine's socio-economic arm. Organized with a view towards social and economic betterment in the health field, the Foundation will be in a better position to effect appropriate change while retaining physician control.

An Executive Committee, consisting of the Foundation officers and one member of the KMA Board of Trustees, has been appointed. David A. Hull, M.D., Lexington, Chairman of the KMA Board of Trustees, was selected as the Trustee member. After the next meeting, to be held some time this month, it is anticipated that committee activities will be formally initiated. Two areas of major concern in order for the Foundation to become fully operational are being pursued. To assume a not-for-profit, tax-exempt status, the Foundation requires Internal Revenue Service approval of purposes, goals, and methods of function. The appropriate descriptive material has been prepared and submitted to IRS. We have been advised that their consideration of our request will be completed some time after the first of the year. The second source of major concern is funding for Foundation activities. In addition to committees appointed to evaluate the areas of endeavor mentioned before, a Finance Committee was established. Although no single committee might logically hold a position of higher priority of actions than another, many Foundation activities will be restricted until funding is achieved.

Contrary to some opinion, the establishment of the Foundation will not change the role of medicine in Kentucky, but will allow for a new direction—active, organized involvement by physicians in shaping the future of health care for the citizens of the Commonwealth.

Henry B. Asman

275082
DEC 8 1975

PRESIDENT, KENTUCKY FOUNDATION FOR MEDICAL CARE, INC.

This is the first in a series of articles written at the request of KMA President John S. Harter, M.D.

Continuing Educational Opportunities

From The

KMA Postgraduate Medical Education Office

IN KENTUCKY

JANUARY

19 Postgraduate course, "Coronary Artery Surgery," by Allan M. Lansing, M.D., 6:30 pm, Jewish Hospital, Louisville

25 Postgraduate courses, "Common Pediatric Eye Problems," by William C. Edwards, M.D., Associate Professor in Ophthalmology, University of Louisville School of Medicine; "Osteomyelitis Septic Arthritis in Children," by James W. Harkess, M.D., Kosair Professor of Orthopedic Surgery; 7:00 to 9:00 pm, Children's Hospital Amphitheater, Louisville

FEBRUARY

16 Postgraduate course, "Osteoporosis," by James W. Harkess, M.D., 6:30 pm, Jewish Hospital, Louisville

22 Postgraduate course, "Current Concepts in Practical Neonatology," by Jerry Seligman, M.D., Assistant Professor, Department of Pediatrics, Neonatology, University of Louisville School of Medicine, 7:00 to 9:00 pm, Children's Hospital Amphitheater, Louisville

MARCH

15 Postgraduate course, "Hyperlipidemia," by Maurice M. Best, M.D., and S. Philip Greiver, M.D., 6:30 pm, Jewish Hospital, Louisville

28 Postgraduate course, "Up-to-Date Management of Left to Right Shunts in Congenital Heart Disease," by Kareem B. Minhas, M.D., Professor of Cardiology, Department of Pediatrics, University of Louisville School of Medicine, 7:00 to 9:00 pm, Children's Hospital Amphitheater, Louisville

IN SURROUNDING STATES

JANUARY

12-13 Postgraduate course, "Common Problems in General Surgery," Cleveland Clinic Educational Foundation, Cleveland, Ohio

17-19 American College of Surgeons sectional meeting, Miami, Florida

FEBRUARY

5-6 Sixty-Eighth Annual AMA Congress on Medical Education, Chicago, Illinois

14-16 American College of Surgeons sectional meeting, St. Louis, Missouri

23 Postgraduate course, "Learning Disabilities and the Physician," Cleveland Clinic Educational Foundation, Cleveland, Ohio

MARCH

1-5 Twenty-First Annual Scientific Session, American College of Cardiology, Chicago, Illinois

7-11 Chicago Medical Society Midwest Clinical Conference and the Illinois State Medical Society Annual Meeting, Chicago, Illinois

13-15 American College of Surgeons sectional meeting, Philadelphia

13-16 Postgraduate course, "Maxillofacial Trauma," Department of Otolaryngology and Maxillofacial Surgery, University of Cincinnati Medical Center, Cincinnati, Ohio. For further information write: Miss Debby Adkins, Office of CONMED, Room 114, College of Medicine, University of Cincinnati, Cincinnati, Ohio 45219

15-18 Seventeenth Annual Central Florida Medical Meeting, Orlando, Florida

SEND IN MEETING INFORMATION

Many medical organizations are setting dates for their spring and summer meetings. At the same time they are choosing the topics to be discussed, arranging for speakers and planning programs.

The Continuing Medical Education office of the Kentucky Medical Association would like to urge these societies and organizations to notify this office of these dates and topics so they can be added to the "Continuing Education Opportunities" calendar in *The Journal*. In this way conflicts in dates can be avoided and a wider audience can be informed of these upcoming meetings.

Please send such information, when available, to the KMA Continuing Medical Education Office, 3532 Ephraim McDowell Drive, Louisville, Ky. 40205.



MEDICAL SCHOOLS



The information in this column is designed to acquaint practicing physicians with the services of and the personnel active in various specialty departments and divisions of the two Kentucky medical schools. You may wish to file this page for future reference.

Biochemistry Department

University of Louisville Health Sciences Center

The primary obligation of a Biochemistry Department in a Health Sciences Center is to provide first-rate instruction in Biochemistry and related subjects (such as Molecular Biology and Biophysics) to students of medicine, of dentistry, and others according to their needs. These students come to us from more than 40 different institutions in any year, with extremely diverse preparation for our subject. They are eager to learn everything needed for their professional goals, yet these goals differ widely. They look to us for help.

The explosive increase of knowledge in Biochemistry within recent years makes it almost impossible for anyone to master all of it. The first task of the teacher is to guide the student by providing a framework setting forth the most significant facts and principles which are essential to each student in preparation for other subjects. A second task is to develop the student's ability to continue to learn and to select what is important for him to learn as an individual. The third task is to provide every student with the opportunity to acquire the additional knowledge and training he may need to develop his own capabilities to the fullest extent, according to his plans for the future. Formal instruction in Biochemistry, elective courses, and opportunities for individual instruction and research are all designed with these three aims in view.

In order to provide first-rate instruction, it is important for the faculty as a whole to carry on scientific research. First, the teacher who is also an investigator is in the best position to keep himself and his students abreast of recent discoveries and to interpret their importance. Second, he will inspire some students to undertake research themselves, and thus keep alive the spark of clinical investigation. Third, in order to attract and keep a first-rate faculty, we must make it possible for them to engage in their chosen fields of research.

Each member of our faculty is a capable and devoted teacher and is also an enthusiastic scientific investigator. Basic facilities for research are provided by the University; technical assistance, expensive apparatus, traveling expenses, and other support are provided from other sources. This year, 15 grants for training and research amount to over $300,000. Twenty-five Ph.D. Degrees have been awarded since 1960.

Professor R. Duncan Dallam, Ph.D., is continuing his study of the function of Vitamin K in oxidative phosphorylation and in protein synthesis. Professor Kenneth P. McConnell, Ph.D., carries on research on the biological function of selenium, both at VA Hospital and in the Department. Professor Robert L. McGeachin, Ph.D., continues his investigation of the differences among the mammalian amylases, including liver amylase. Professor John Taylor, Ph.D., is studying the relation of sulfhydryl groups to the structure and functions of different hemoglobins. Professor Ulrich F. Westphal, Ph. D., who has held a USPHS Research Career Award since 1961, is an authority on

the subject of steroid hormone-protein interactions, and is the author of a comprehensive monograph on the subject, published in 1971. Associate Professor Calvin A. Lang, Sc. D., holds a USPHS Research Career Development Award (1967-1972). He is an authority on the biochemistry of the mosquito, one of several organisms being studied in his laboratory with respect to aging. Associate Professor Robert S. Levy, Ph.D., is engaged in the study of the plasma lipoproteins and their relation to atherosclerosis. Associate Professor John A. Yankeelov, Jr., Ph.D., is looking at the structures of enzymes with the aid of models and specific reagents. Assistant Professor Robert W. Benson, Ph.D., studies nucleic acid polymerases, enzymes essential in protein synthesis. Assistant Professor Margaret L. Fonda, Ph.D., is investigating glutamate decarboxylase in bacteria, and in the brain as a function of aging. Assistant Professor Robert D. Gray, Ph.D., is an expert in the measurement of rapid reactions, such as the oxygenation of hemoglobin. Assistant Professor Mary A. Hilton, Ph.D., is studying the enzymology and ultrastructure of mouse ova. Assistant Professor Jerald L. Hoffman, Ph.D., is concerned with the structure and function of transfer ribonucleic acid. Robert M. Burton, Ph.D., Instructor, works in the field of proteins which interact specifically with small molecules such as hormones.

John Fuller Taylor
Professor and Chairman
Department of Biochemistry

A Link in the Chain

auxiliary



Mrs. Stevens

THE Woman's Auxiliary to the Kentucky Medical Association is a strong organization of 1,136 women. That's a lot of woman-power! But when you consider that the Kentucky Medical Association has 2,420 members, you realize the extent of our unmet potential.

If your wife is not a member, have you ever asked her why? It may be she already feels too involved in community activities, or is working in your office, or furthering her own education. On the other hand, it may be that she has never felt needed by the Auxiliary or had the incentive to join.

You can provide that incentive. As a member of KMA, you realize the importance of a strong organization during these challenging times. The Auxiliary devotes its energies to projects that further your aims, such as recruiting high school students in health careers, providing loans for students in health career training, raising money for AMA-ERF, educating ourselves in medical legislation, and seeing that physicians' families are registered to vote. An important part of Auxiliary is providing an opportunity for friendships among physicians' families.

The theme of WA-KMA this year is, "Let's Care." If we do not care, who will? Can we expect a lawyer's wife to care how many nurses are trained every year, or a salesman's wife to care about the cost of medical education? Encourage your wife to show she cares. We need her!

We are so proud to have one of our members, Mrs. Raymond Jones, as the new President of the Woman's Auxiliary to the Southern Medical Association. We know she will bring honor to Kentucky and to the Southern Medical Association during the coming year.

MRS. DAVID STEVENS, PRESIDENT
WOMAN'S AUXILIARY TO KMA



THE HUMAN HEART, A GUIDE TO HEART DISEASE (Second Edition): by Brendon Phipps, M.D.; published by The C. V. Mosby Company, St. Louis, 1971; 245 pages; price $5.75.

In 1967, the first edition of this manual was published. The purpose was to help persons with heart disease understand cardiac anatomy, physiology, and pathologic processes. General therapeutic advice was also given. However, paramedical personnel trained in the care of cardiac patients purchased most of the first edition. To please both groups of readers, Doctor Phipps has expanded the second edition.

Several sections are written by contributing authors. The coronary artery disease and congenital heart malformation chapters are notable for their clarity of word and illustration.

Unfortunately, the attempt to please both groups has resulted in a folksy primer of cardiology which is too detailed for the anxious patient and not scientific enough for the sophisticated intensive care nurse.

MORRIS M. WEISS, M.D.

REVIEW OF MEDICAL PHYSIOLOGY: by William F. Ganong; published by Lange Medical Publications, Los Altos, Calif., 1971; 573 pages; price $8.50.

This is a good, concise, up-to-date coverage of medical physiology in a book which is about one-third the size of the usual textbook of physiology.

Its conciseness is due largely to an intentionally dogmatic presentation of material. Historical background is eliminated, discussion of controversial issues is avoided, and references are limited to a general list at the end of each major section.

The order of subject presentation is a conventional one starting with general physiologic principles and the physiology of nerve and muscle cells. This is followed by functions of the nervous system, endocrinology and metabolism, gastrointestinal function, circulation, respiration, and the formation and excretion of urine. The discussion of endocrinology and metabolism is the most comprehensive; however, the coverage of all topics is unusually uniform.

The clarity of presentation is greatly enhanced by the wide use of diagrams and summary tables, many of which are excellent. Flow diagrams are utilized extensively to supplement the discussion of metabolic pathways and the synthesis and action of hormones. Several tables are devoted to drug actions such as the mechanisms of action of diuretics and the effect of drugs on the sympathetic nervous system.

Symptoms resulting from disturbed physiology are discussed briefly in the appropriate places in the text. In addition, the sections on circulation and respiration each end with a chapter containing a more extensive coverage of the pathophysiology of such conditions as shock, hypertension, hypoxia, and oxygen toxicity.

As its title indicates, this book is a review of medical physiology and will be of most use to those who have some previous knowledge of the field. It is particularly recommended to those who wish a concise summary of the current ideas and concepts of mammalian physiology, either for general review purposes or to be brought rapidly up to date in a specific area of interest.

JAMES C. MOORE, M.D.

ELECTRODIAGNOSIS AND ELECTROMYOGRAPHY (Third Edition): edited by Sidney Licht, M.D.; published by Elizabeth Licht, Connecticut, 1971; 533 pages; price $14.00.

This is a greatly expanded and updated edition of a standard textbook in the field of Electromyography.

In the broad area of nerve and muscle diseases, it is a must addition to every reference library. It is the basic introduction to the field, as well as a source book for references and research.

The influence of Professor Gilliatt in the selection of new contributors and subject material has been instrumental in completing the transition of the text from its original brief "compendium" form to the present definitive "foundation textbook" character.

Doctor Willison's concise chapter on Quantitative Electromyography and Doctor LeQuesne's chapter on Nerve Conduction Study are informative and will be of interest and value to all physicians who come into contact with patients with nerve or muscle diseases. In addition, Professor Gilliatt's chapter on the history of nerve conduction studies is entertaining and Professor Johnson's notes on the electromyographic examination are most realistic and practical.

In summary: for ready reference, review, or as an introduction to the subject of Electromyography and Nerve Conduction Studies, the new edition of this volume is excellent.

L. J. KLEIN, M.D.

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

CASE 11-69. This 26-year-old married, white, G3, P2, EDC 12/10/69, was under the care of a private physician. Her two children were in good health and had weighed about 7 1/2 pounds at birth. She had a history of short labors.

She had been seen in the emergency room for hematuria several days prior to her admission to the hospital. Urinalysis showed some abnormalities, and she was referred to a urologist for follow-up care. Her membranes ruptured spontaneously, 11/2/69, and she stated that she had not felt any fetal movement for five days. She had no vaginal bleeding and no evidence of toxemia. She was advised that, since she was leaking fluid, she should enter the hospital.

On admission, her significant finding was a low hematocrit (22.9%) with a hemoglobin of 7 1/2 grams. She did not clinically appear to be this anemic. However, since it was felt that she would deliver in the next several hours, she was typed and cross-matched, and blood was held for delivery.

The patient had an appendectomy in 1963, and at that time a cystic tumor of the breast was removed. She was RH positive, and her VDRL was non reactive 6/13/69.

On admission to the hospital, the cervix was one finger dilated, cephalic presentation, minus one station. No fetal heart could be heard with the stethoscope, nor with the doptone. Her blood pressure on admission was 138/94, temperature 98.6; pulse was 87, respirations 24. She was given phenergan 25 mg IM for emotional upset after she recognized that apparently something had happened to the baby. A vaginal exam by her physician at 4:45 pm revealed the cervix to be the same. She was medicated with Demerol 50 mg and Scopolamine 0.2 mg at 5:40 pm. At 6:15 pm, she was 2 to 2 1/2 fingers dilated. The cervix at 7:15 pm was 2 1/2 fingers dilated, still somewhat thick. She was having fairly hard contractions every three minutes. She was given another 50 mg of Demerol, Scopolamine 0.2 mg IV at 8:52 pm. At 9:05 pm, the cervix was 2 1/2 fingers dilated and thinner. She was started on Pitocin infusion, 1000 cc of D5W with 5 IU of Pitocin at 9:15 pm. At 9:40 pm, she was 3 1/2 to 4 fingers dilated. She was taken to the delivery room, given a saddle block by the anesthesiologist, and she delivered spontaneously a 5 pound, 11 ounce stillborn male infant, with right medio, lateral episiotomy at 9:57 pm from the ROA position. The placenta separated intact spontaneously.

She passed an estimated 600 to 700 cc of old clot that was apparently hidden retroplacental. The placenta revealed a third of the margin had been detached with organized clot at the margin. Because the patient showed some evidence of shock, the previously typed blood was started in the delivery room while the episiotomy was repaired. The cervix was found to be intact after expression of all the clots and opening the Pitocin infusion. The fundus was firm. The patient's condition seemed satisfactory. The apparent cause of fetal death was premature separation of the placenta. No other abnormalities were found.

The patient's blood pressure at 10:00 pm was 92/70, and her pulse was strong; the uterus was firm and the bleeding controlled. The patient was admitted to floor at 10:20 pm; blood pressure was 98/50; pulse was 120. Respirations were regular at 20. The fundus was firm, and bleeding was described as normal. A urinary catheter was attached to drainage, and the blood was running. At 10:35 pm, her blood pressure was 104/64, pulse 100, respirations 20; fundus was firm; bleeding was normal. At 11:00 pm, her blood pressure was 108/80, pulse 120, respirations 24. The bleeding was then described as heavy. At 11:15 pm, her blood pressure had dropped to 50/0; her pulse was unobtainable. The blood was pumped in; another Pitocin infusion was started in the opposite arm by the anesthesiologist; her physician returned. Her blood pressure was 80/50, pulse was stronger; 500 cc of whole blood were started in the opposite arm and pumped in; at 11:20 pm, her blood pressure was 76/50, her pulse was 120, respirations 14. Two grams of fibrinogen were added to the IV at 11:40 pm, followed by two more grams of fibrinogen. At 12:00, her blood pressure was 68/50; her pulse was still rapid. One thousand cc of Ringer's solution with Pitocin were added to the IV in the left arm. The fundus was firm; bleeding was described as moderate. Two more grams of fibrinogen were pumped in, and Ringers was added to the IV. At 12:20 am, her blood pressure was 72/40. She was complaining of some cramping. At 12:25 pm, 500 cc of blood were added to the IV in her left arm. Her blood pressure was 80/50, pulse 104, respirations 14. The fundus was firm; the patient was somewhat restless; the vaginal bleeding had slackened. She was uncomfortable, so Demerol 75 mg was given IV at 12:35 am. She had 30 cc of urine output. At this time, 500 cc of blood were added. Her pulse was still somewhat irregular and rapid. She was nauseated at 1:00 am, and vomited a small amount of greenish fluid. She passed a small clot at this time, and her pulse was rapid. Her blood pressure was 68/0.

She was transferred to the intensive care unit, having received four pints of blood and six grams of fibrinogen. She was accompanied by her physician to the intensive care unit. Her blood pressure was still unobtainable, and her skin was cool. She appeared ashen, and her blood pressure at 1:20 am was 48, pulse 120, and thready; respirations were 23 and somewhat irregular. She appeared somewhat sedated. She responded to strong verbal stimuli by opening her eyes. At 1:25 am, her blood pressure was 50/? by palpation. She had absorbed all the blood at 1:35, and Ringers with Pitocin was added. Her blood pressure was 52, pulse 124; she had cyanosis of her lips, and her skin was pale in color. She became more nauseated and vomited. At this time, her blood pressure was 60/?, and her pulse was 134.

At 1:50 am, her blood pressure was 30/?. She continued to run a rapid pulse of 140 and was receiving oxygen. She received Ergotrate 1 cc IM at 2:45 am. Her blood pressure was unobtainable at 3:00 am. Respirations were rapid and shallow. She was given Solucortef 100 mg. At 3:05 am, her nail beds were very cyanotic. At 3:25 am, her femoral pulse seemed slightly stronger. Her respirations were about 36, shallow and grunting. Five hundred cc of blood were added to the IV and pumped in. Tourniquets were applied to both legs.

At 3:40 am, blood pressure was still not palpable. She seemed more responsive, and the color was slightly better in her nail beds, but she had no urinary output. Aramine 10 mg IM was given and tourniquets again applied to both legs. Her apical pulse was 158, and the head of the bed was raised. The skin was warm and dry, and her respirations were about 28. Her palpable blood pressure was 40. At 4:20 am, her blood pressure was 68, pulse 158, respirations 30. Her blood pressure improved at 4:25 am, 112/70; her pulse was 140. She responded to moderate stimuli. At 4:30 am, she seemed somewhat ashen and cyanotic in her nail beds and responded to questions. The tourniquets were removed. At 4:45 am, her blood pressure by palpation was 112, pulse 140. She was respondent to her husband's and mother's comments. She complained of some chest pain.

At 5:00 am, her blood pressure was 80 with tourniquets on both legs again. Her abdomen seemed somewhat distended. Aramine 10 mg IM was given at 5:15 am. Five hundred cc more blood was started. She had another 100 mg of Solucortef at 5:35 am. A portable chest x-ray was obtained.

A PA sitting bedside chest examination revealed no infiltration in either lung. The heart, thorax, and diaphragm appeared normal. It was read as a normal chest. Around 6:00 am, they were unable to auscultate the blood pressure. She vomited about 75 cc coffee ground liquid. Her blood pressure was 82/70, in her right arm. She became nauseated again at 6:25 am and was given 25 mg of phenergan IM. There was no palpable blood pressure at 6:33 am. Her color was poor, and she again complained of chest pain. One hundred mg of Aramine were added to 1000 cc of Ringer's Lactate. At 6:40 am, Bennett respiratory therapy was given rapidly but with no results. She ceased breathing and heartbeat at 7:00 am and was pronounced dead. An autopsy was desired; however, none was obtained. The cause of death was listed as abruptio placenta with antepartum fetal death, afibrinogenemia due to amniotic fluid embolus.

Comment

The Committee classified this death as obstetric with preventable factors. The probable cause of death was felt to be a ruptured uterus. The use of spinal anesthesia for a patient with severe anemia and an unexplained fetal death was criticized, since spinal anesthesia is contraindicated in patients with active bleeding or possible abruptio placenta. Anemia is a relative contraindication. In either case, sympathetic blockade may result in shock. Fibrinogen should not be used unless an active clotting defect is present (none was mentioned).

The Committee agreed that blood probably should have been given to this severely anemic patient during labor. The uterine cavity apparently was not explored at delivery and definitely should have been when the patient continued to have unexplained bleeding.



THE INSURANCE PAGE



Do Deductibles Prevent Over-Utilization?

PERIODICALLY, it is well to evaluate basic ideas and impressions. Things that appear to be true in years past, have a way of not standing up on closer inspection in view of new knowledge that is added with time.

Most of us have always believed that deductible insurance policies have helped to prevent over-utilization. Because past studies of this question have been inconclusive, Blue Cross-Blue Shield has made a new one. This study, too, is not entirely satisfactory or conclusive. Of the 60 Blue Cross-Blue Shield plans which responded to a questionnaire, only 34 were prepared to state definite opinions or impressions as to whether deductibles or co-payments tend to curb utilization.

R. M. Harrington, general manager of Blue Cross Plan of Watertown, N.Y., said, "I think only the people who believe they were good risks bought deductible policies from our plan. As soon as they had one bout of illness, most of them did not want it any more. I think most people go to the hospital at the advice of their doctors, and a small deductible has no bearing at all."

Blue Cross of Western Pennsylvania made a study of a group of subscribers who were required to pay $5 a day for the first 15 days in the hospital, comparing them with a similar group who had full service benefits. They found no statistically significant difference in patient-days or admissions per 1,000, or in length of stay.

Blue Cross of Northeastern Pennsylvania commented, "We believe that co-insurance and deductibles are without merit in affecting the use of medical care."

It would seem to this writer, after viewing the report, that people who have ready cash to pay for deductibles are not influenced by deductibles in their hospital utilization, while poor people who are unable to afford the deductible may be delayed in obtaining adequate medical care. This also seems to be the opinion of the Kentucky Public Assistance program, as they pay the deductibles under Medicare for Public Assistance beneficiaries.

LEWIS DICKINSON, M.D.

PUBLIC HEALTH PAGE

Progress Report on the PKU Testing Program †

WILLIAM P. MCELWAIN, M.D., M.P.H.
Commissioner of Health
Commonwealth of Kentucky

IN 1965, Kentucky adopted a state-wide screening program for PKU requiring hospitals to obtain blood tests from infants in their newborn nurseries. With this move, significant progress was made in the State in providing this service for all newborn babies.

It is imperative that all infants be tested soon after birth and that treatment of PKU babies be begun immediately. The earlier treatment is begun for the infant with PKU, the better his chances are for becoming a normal, healthy child. There have been cases where damage has occurred in the untreated PKU patients even during the first month of life.

Results of this screening effort have been gratifying, but not yet perfect. Only about 85% of the infants now born in Kentucky are actually being tested for PKU.

The following are reasons for our failure to obtain the test for all babies:

1) A small percentage of all babies (1.5%) are born at home, where the attending physician or midwife may fail to recognize the importance of PKU testing and thus may fail to obtain a blood sample from the newborn.

2) A fair number of Kentucky infants are born in hospitals and small clinics where they are discharged before they are three to four days old. An accurate PKU test cannot be obtained until the baby has been fed a protein-containing diet for 24-48 hours.

Primary responsibility for procuring the PKU test lies with the attending physician. For various reasons, he may fail to see the infant after it is discharged from the nursery. He may subsequently fail to alert the local public health nurse that the infant has gone home before a PKU test could be done. Thus, some infants never return for the test.

3) A fair percentage of PKU tests are returned as unsatisfactory because hospital personnel have failed to obtain an adequate sample of blood from the infant.

"Unsatisfactory" reports reach the hospital and doctor after the newborn infant has been discharged. This means, in effect, that the baby has not had a PKU test. The attending physician must then be dilligent in obtaining a repeat, satisfactory test.

It is timely that we re-emphasize to physicians, hospital administrators, and public health nurses the importance of PKU screening. Testing of newborn babies is advisable, not only because "it's the law," but because of serious implications when a child with PKU is missed. There is the tragedy of wasted human life. Also to be considered are costs to the family and to society, and the personal grief of the physician who fails to diagnose the child who has this treatable disorder.

It is the infant born at home or the one who is discharged from a hospital before three days of age who is in greatest danger of not having early medical follow-up care. Thus, if the infant is not tested for PKU during the first week of life, it is unlikely that he will be tested at all without an agressive interest on the part of the physician.

†*This article was prepared by: Jo Anne Sexton, M.D., Director, Child Development Program, Division of Maternal and Child Health, Kentucky State Department of Health, 275 East Main Street, Frankfort, Kentucky 40601*

Diagnosis

A positive screening test for PKU does not conclusively prove the diagnosis of phenylketonuria. Detailed amino acid studies, PKU loading test, observation of the baby under treatment, and other testing may be necessary.

The two university medical centers are the only facilities in Kentucky adequately equipped to do this testing. It is therefore strongly recommended that any infant suspected of having PKU be referred to the pediatric metabolic disease specialist at University of Louisville or University of Kentucky Medical Center.

Treatment

Dietary management is begun after the newborn baby has been evaluated at one of the university medical centers. The milligrams of phenylalanine to be given in the daily diet are computed by the metabolic disease specialist and by a nutritionist from Nutrition Program, Division of Maternal and Child Health.

Blood levels are monitored weekly at first, or as often as the physician feels is necessary. The medical center specialist and nutritionist work closely with mother and family doctor in computing dietary changes and in observing the baby's growth and development patterns.

It is important that the child with PKU have his own family physician or pediatrician, so that his general health can be protected and acute illnesses of childhood can be promptly treated. A partnership of mother, doctor, nutritionist, and medical center specialist is necessary for optimum development of the child with PKU. Anything less will compromise the patient's chances for good physical growth and mental development.

Kentucky can be justly proud of its PKU Program. Some of Kentucky's surrounding states do not even have a PKU screening program for newborn infants. Medical centers in some states surrounding Kentucky do not have diagnostic and treatment facilities of the quality of those in our own medical schools. Children from out-of-state are sometimes referred to University of Louisville and University of Kentucky Medical Center for diagnosis and treatment of this disease.

We cannot emphasize too strongly to physicians the importance of the above procedure.

Progress to Date

1) Inadequate dietary control of the PKU patient can result in mental retardation, epilepsy, and hyperactive behavior. We have several such patients in Kentucky. These children were discovered too late (after a few months of age) for best results of therapy, or the family failed to follow the prescribed diet.

2) A too-strict dietary restriction of phenylalanine can result in severe protein malnutrition. This may lead to poor physical growth. Mental retardation can also result if blood phenylalanine levels remain too low.

In the past year, we have seen two PKU babies with small head size, spasticity, seizures, and developmental delay. Both infants had had too stringent dietary control, with resulting abnormally low blood phenylalanine levels. Both had had infrequent monitoring of blood levels. One child came from out-of-state, because a PKU treatment center was not readily available in his area.

3) In the past, a carefully managed child with PKU could be expected to have dull normal intelligence, perhaps with hyperactive behavior and specific learning disorders.

With perfection of dietary management, the picture has improved. There are a number of Kentucky PKU patients with IQ scores over 100 and with normal behavior. One child has an IQ of 140, while several others are in the bright normal to superior intelligence range.

Babies with PKU detected this year	**8**
Cost of program	**$15,000**
Cost of caring for one untreated PKU child for life in an institution	**over $100,000**

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Adults—2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection. *Children*—0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, followed by 0.25 Gm/20 lbs *b.i.d.* Maximum dose for children should not exceed 75 mg/kg/24 hrs.

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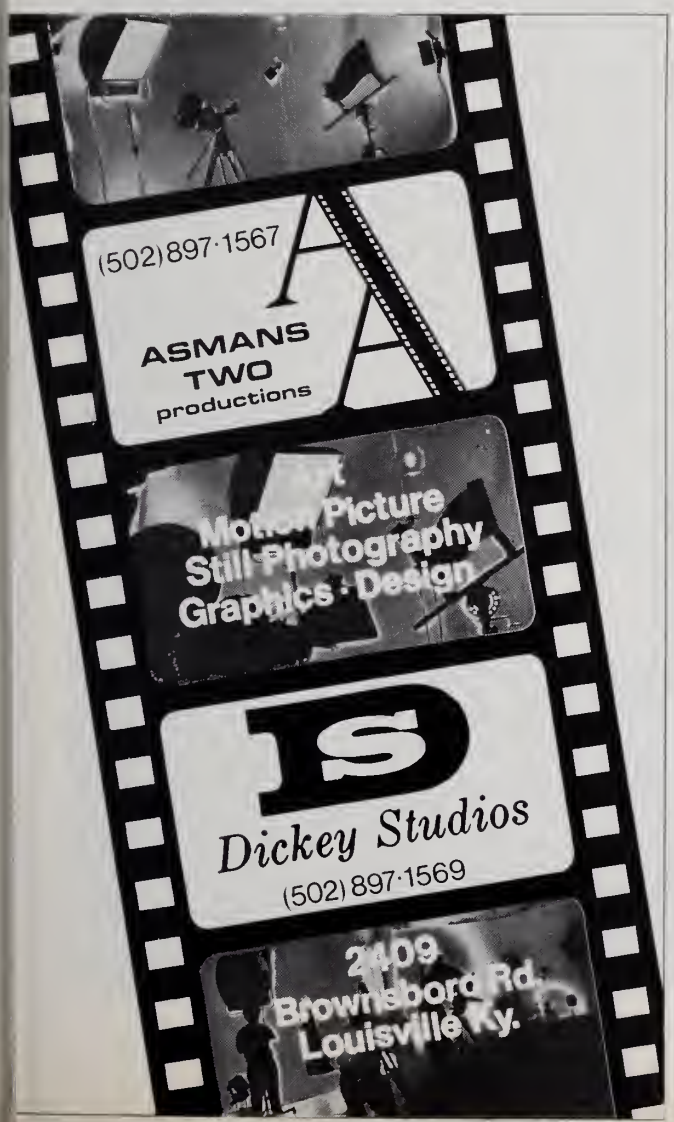
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The JOURNAL of the
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Detection and Treatment of Breast Cysts by Aspiration

David W. Kinnaird, M.D.

Louisville, Kentucky

"Macro" cysts of the breast may be safely treated by simple aspiration as suggested by a follow-up review of 47 patients.

THE clinical problem in evaluation of cystic disease of the female breast lies in the inability of the physician to exclude, short of surgical biopsy, malignant disease. This poses a dilemma of considerable magnitude when one realizes that up to 50 percent of all women are subject to some form of cystic breast disorder.

Based on the experience of the author and others,[3, 5, 6] breast cysts often are large enough to be detected clinically with confirmation by simple aspiration of the cyst. Such cysts are usually referred to as "macro" cysts and measure more than 1½ centimeters in diameter. With a little experience, one can become adept in diagnosis of "macro" cysts by the simple ballottement maneuver (Figure 1). It would seem reasonable to assume such cysts are benign if the following criteria are met:

1. The cyst collapses completely following the aspiration.
2. The cyst fluid is devoid of any abnormal cells on Papanicolau smear.
3. Mammograms are negative.
4. The cystic mass is no longer detectable after an interval of two to three weeks.

While there is a paucity of reports of carcinoma in association with "macro" cysts,[2, 4] doctors are reluctant to avail themselves of this simple diagnostic and treatment technique. With the increasing demand for clinical breast evaluations, as a consequence of cancer education programs, and the increasing demands for hospital beds, it behooves surgeons and physicians to consider anew the merits of breast cyst aspirations.

Beginning ten years ago, all clinically detectable "macro" cysts that were greater than 1½ centimeters in diameter were subjected by the author to simple aspiration technique as follows:

1. Antiseptic preparation of the skin.
2. One percent Xylocaine 'wheal' for local anesthesia.
3. Localization of the cyst with opposite hand, and introduction of a #20 needle directly into the cyst, with aspiration of all contents.

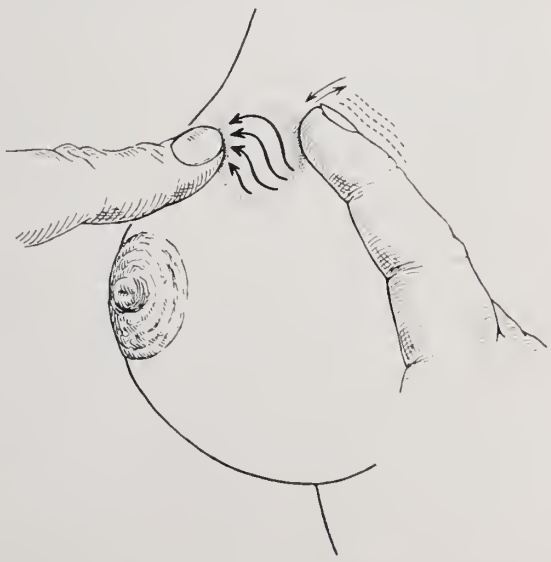
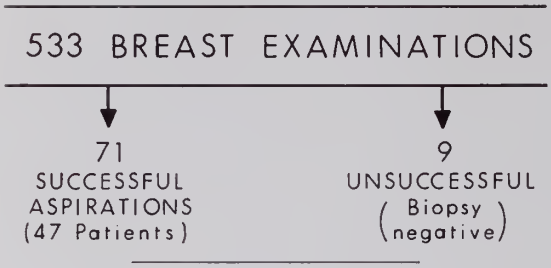


FIGURE 1 Detection of cyst of breast by ballottement.

TABLE I



4. Digital pressure to aspiration site for five minutes, followed by a band aid dressing.

Pain at the time of the injection of the local anesthesia is minimal and the aspiration itself is practically painless. No patient has refused subsequent aspiration of a breast cyst.

From September 1, 1959, to February 1, 1970, 533 separate consultative or follow-up breast evaluations were carried out in the examiners' office. In 80 instances (47 patients), a tentative diagnosis of a "macro" cyst was established and confirmed by aspiration in all but nine cases; the latter proven by biopsy to be benign.

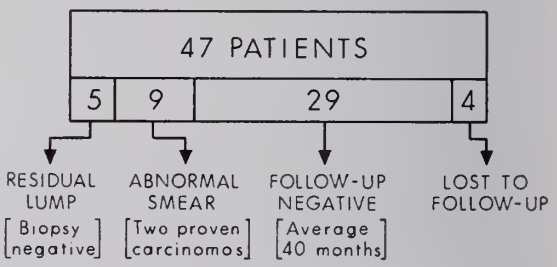
Forty-seven patients had a confirmatory aspiration of one or more cysts (Table II). In five instances, a mass or lump remained following aspiration of the cyst, and these cases were subjected to biopsy with no malignant disease reported. A total of ten cases were shown to have abnormal cells on Papanicolau smear, and all of these had subsequent biopsy. It is significant that two of this group with abnormal cellular findings had carcinoma of the breast. It is also worth emphasizing that in both of these patients aspiration yielded dark, thin, bloody fluid, instead of the usual thin, brown and murky aspirate. Four patients were lost to follow-up and no further data was available. The 29 remaining patients have been followed on an average of 40 months, and in no instance has the diagnosis of breast carcinoma been established.

Admittedly, such a small series does not lend itself to statistical interpretation, but does lead one to believe that aspiration of "macro" breast cysts might well be a safe office diagnostic and treatment method. If such a technique is acceptable to the medical profession, it would serve two primary goals:

1. It would spare a large number of women from the anxiety and inconvenience of breast biopsy.
2. It would lessen somewhat the demands for hospital beds.[1]

TABLE II

OUTCOME IN ALL CASES WITH PROVEN CYSTS



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Prescription of Psychotropic Drugs In Eastern Kentucky†

Conrad H. Daum, Bruce Heinz, and Steve Combs
Lexington, Kentucky

A survey of patient visits to a sample of general practitioners in Health Region XII showed a high frequency of phychiatric diagnoses. The rate of prescription of psychotrophic drugs was in keeping with this finding.

THIS is a study of the prescription of psychotropic drugs and of the frequency of psychiatric diagnoses in an Eastern Kentucky health region. The purpose of the study is to follow up recent medical assistance figures indicating that a large volume of psychotropic drugs are being prescribed in Kentucky.[1] Recent literature suggests that this problem is not just localized here.[2, 3] The literature also suggests that Eastern Kentucky may have a high incidence of diagnosable psychiatric illness compared to other areas of the country.[4, 5, 6] A secondary purpose of the study is to further document this fact.

Method

Health Region XII of Eastern Kentucky was assigned to a group of fourth year medical students as their senior project area. This region includes Breathitt, Knott, Lee, Leslie, Letcher, Owsley, Perry, and Wolfe Counties.

A sample of eight physicians was randomly selected from a recent census of physicians in Kentucky.[7] One general practitioner from each county was chosen. In cases where no physician in a county would cooperate, counties were randomly drawn and an additional physician substituted. Five doctors refused to participate and a sixth was out of town during the entire study period. A seventh was deceased. The eight cooperating physicians were interviewed in their office; and 32 patient visits for the year 1970 were randomly drawn from their files, eight from each quarter of the year.

Patients were identified only by code number. The diagnoses for the visit were recorded using the Hospital International Disease Code Classification.[8] The prescriptions noted for that visit were recorded using the numerical classification of the American Association of Hospital Pharmacists.[9] For diagnoses or treatments of a continuing nature, e.g., hypertension, the chart was searched for the actual diagnosis or treatment noted. Psychiatric diagnoses were defined as H-ICDA category V.[8] Psychotropic drugs were defined as pharmacy codes 28:16, 28:20, and 28:24.[9]

Results

A total of 256 patient visits were obtained. This consisted of 324 separate diagnoses and 471 individual prescriptions. The diagnoses are summarized in Table I, the prescriptions in Table II. Note that psychiatric diagnoses are surpassed in frequency only by routine examinations, cardiovascular disease, and respiratory illness as a diagnostic category. All but six of the psychiatric problems were diagnosed as neuroses. The frequency of psychotropic prescriptions is exceeded only by antibiotics and analgesics. Penicillins accounted for slightly less than half of all the antibiotics used. Aspirin and Darvon (propoxyphene), in that order, were by far the most used analgesics. The percentage of psychotropics prescribed (9.9%) approximated the percentage of psychiatric diagnoses (9.9%).

Information about the patient visits came from use of the Chi square test. There was no significant difference between the frequency for which psychotropics were prescribed compared to the frequency for which psychiatric diagnoses were made on that visit ($\chi^2=1.65$, df=1,p>.1). The doctors sampled did not vary

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significantly among themselves on the frequency with which they noted a psychiatric diagnosis on a patient visit (χ^2=10.8,df=7, p>.1). Likewise, they did not vary significantly on the frequency with which they prescribed a psychotropic drug on a patient visit (χ^2= 9.8,df=7,p>.1). No significant correlation existed between the number of patients the doctor stated he saw per day and the number of patient visits on which a psychotropic drug was prescribed (r=.24,df=7,p>.1).

Discussion

In comparing the results of this study with the preceeding ones cited in the introduction, the striking result noted is the high incidence of psychopathology. We found documented nearly twice the incidence of psychiatric disorders as other investigators in, presumably,

TABLE I
DIAGNOSES

CLASS (CODES)	TITLE	FREQUENCY	PER CENT
I (001-136)	Infective and Parasitic	22	6.8
II (140-239)	Neoplasms	0	0.0
III (240-279)	Endocrine, Nutritional, and Metabolic	8	2.5
IV (280-289)	Blood and Blood-Forming Organs	4	1.2
**V (290-319)	Mental Disorders	32	9.9
VI (320-389)	Nervous System and Sense Organs	5	1.5
VII (390-458)	Circulatory System	35	10.8
VIII (460-519)	Respiratory System	57	17.6
IX (520-577)	Digestive System	13	4.0
X (580-629)	Genitourinary System	23	7.1
XI (630-678) (Y60-Y69)	Delivery and Complications of Pregnancy, Childbirth, and Puerperium	9	2.8
XII (680-709)	Skin and Subcutaneous Tissue	12	3.7
XIII (710-739)	Musculoskeletal System and Connective Tissue	13	4.0
XIV (740-759)	Congenital Anomalies	0	0.0
XV (772-778) (Y20-Y29)	Diseases Peculiar to Newborn Infants	33	10.1
XVI (780-797)	Physical Signs, Symptoms, Ill-defined Conditions	14	4.3
XVII (800-999)	Injuries and Adverse Effects	10	3.1
— (Y00-Y17)	Special Conditions and Examinations Without Sickness	34	10.4
	Total	324	99.8

TABLE II
PRESCRIBED DRUGS

CODE			
04:00	Antihistimine Drugs	27	5.7
08:00	Anti-infective Agents	151	32.1
10:00	Antineoplastic Agents	0	0.0
12:00	Autonomic Drugs	15	3.2
16:00	Blood Derivatives	0	0.0
20:00	Blood Formation and Coagulation	7	1.5
24:00	Cardiovascular Drugs	17	3.6
**28:00	Central Nervous System Drugs (total)	117	24.8
:08	Analgesics and Antipyretics	65	13.8
* :16	Psychotheraputic Agents	27	5.7
* :20	Respiratory and Cerebral Stimulants	2	0.4
* :24	Sedatives and Hypnotics	18	3.8
:xx	Other	5	1.1
36:00	Diagnostic Agents	0	0.0
40:00	Electrolytic, Caloric, and Water Balance	21	4.5
44:00	Enzymes	0	0.0
48:00	Expectorants and Cough Preparations	24	5.1
52:00	Eye, Ear, Nose, and Throat Preparations	8	1.7
56:00	Gastrointestinal Drugs	21	4.5
60:00	Cold Compounds	0	0.0
64:00	Heavy Metal Antagonists	0	0.0
68:00	Hormones and Synthetic Substitutes	17	3.6
72:00	Local Anesthetics	0	0.0
76:00	Oxytocics	0	0.0
78:00	Radioactive Agents	0	0.0
80:00	Serums, Toxoids, and Vaccines	5	1.1
84:00	Skin and Mucous Membrane Preparations	13	2.8
86:00	Spasmolytic Agents	7	1.5
88:00	Vitamins	16	3.4
92:00	Unclassified Therapeutic Agents	5	1.1
	Total	471	100.2

more urbanized settings.[4, 5] That this pathology may not receive definitive treatment is suggested by a percentage of medically indigent persons in this region several times that of the state as a whole,[10] and by the low physician-patient ratio (under 1:2000) in this region. The prescription rate of psychotropics approximated the noted incidence of psychiatric disease. This finding is even more important when compared with other work. The percentage of psychotropics prescribed in our study was less than that found in a nationwide survey published by Balter and Levine.[3] The fact that the incidence of psychiatric illness and the use of psychotropic drugs coincide so closely in this study should be viewed positively. It is realistic to consider that these drugs were used with considerable constraint and not indiscriminately prescribed.

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Manuscripts should be submitted in duplicate to The Journal of KMA, an original copy and one carbon, and typed with double spacing. Maximum length of an article should not exceed 4500 words; the Board of Consultants on Scientific Articles prefers that they be briefer than this when possible.

In submitting a manuscript, the author is requested to include a concise summary, not to exceed 35 words, to be used as a sub-title when the article is published in The Journal. The purpose of the summary is to create additional interest and encourage greater readership.

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Development of a Rural Demonstration Practice†

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Evarts, Kentucky

The development of a demonstration medical practice is described. A health center model requiring the formation of a coalition was chosen. Planning and implementation phases are detailed. Evaluation will be of interest to Journal readers.

A DEMONSTRATION medical practice is an endeavor that involves the interests of several groups of persons. The professional who practices there looks for an effective and satisfactory way for the delivery of his skills, while the need for medical services is the primary interest in the mind of most citizens in the area. There is interest by professionals both in evaluating new approaches to the delivery of services and in role modifications.

A demonstration project, therefore, must achieve successful planning and development to jointly meet the various needs and objectives. This activity is the nature of a coalition. Webster defines a coalition as "a combination, an alliance of factions for some specific purpose." Many examples of medical coalitions exist in Kentucky today. Several involve local, state, and national institutions. One is the Clover Fork Clinic in Evarts, Kentucky, a clinic developed along the lines of a health center. The health center model is often suggested, but frequently not capable of being well integrated into the local system of health care.

The purpose of this paper is to describe the stages of our clinic's development. The paper outlines factors that brought about the clinic's origin and shaped its objectives.

The clinic staff presently consists of a director who is a physician, two family physicians, two registered nurse practitioners, a laboratory/x-ray technician, a dentist, medical and dental assistants, an administrator, and other administrative and clerical personnel. The clinic is committed to programs of comprehensive medical and dental care, prevention and health education, training of health care personnel, family-centered services, and the study of aspects of delivery of such services.

Background of the Clinic

The Clover Fork area of Harlan County comprises the valley in which the Clover Fork branch of the Cumberland River flows between Big Black Mountain and Little Black Mountain in the southeast portion of the county. The single road that leads from Harlan into this area fades out at the far end in a discouraging series of curves in the remote highlands of Lee County, Virginia. The Valley's population of 9,000 is largely distributed over a dozen or so communities of 500-1,000 population each, strung out along the long, narrow valley. See Figure 1 for a county map of Harlan County.

FIGURE 1



Planning for the Clinic

The National Commission of Community Health Services inquired into the dynamics of community health planning. Their flow model of readiness is as follows:[1]

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Leadership Readiness
Professional, Government, Citizen Readiness (1) → Planning Mechanism (2) → Planning Action (3) → Action (4) → Individual Treatment or Prevention (5)

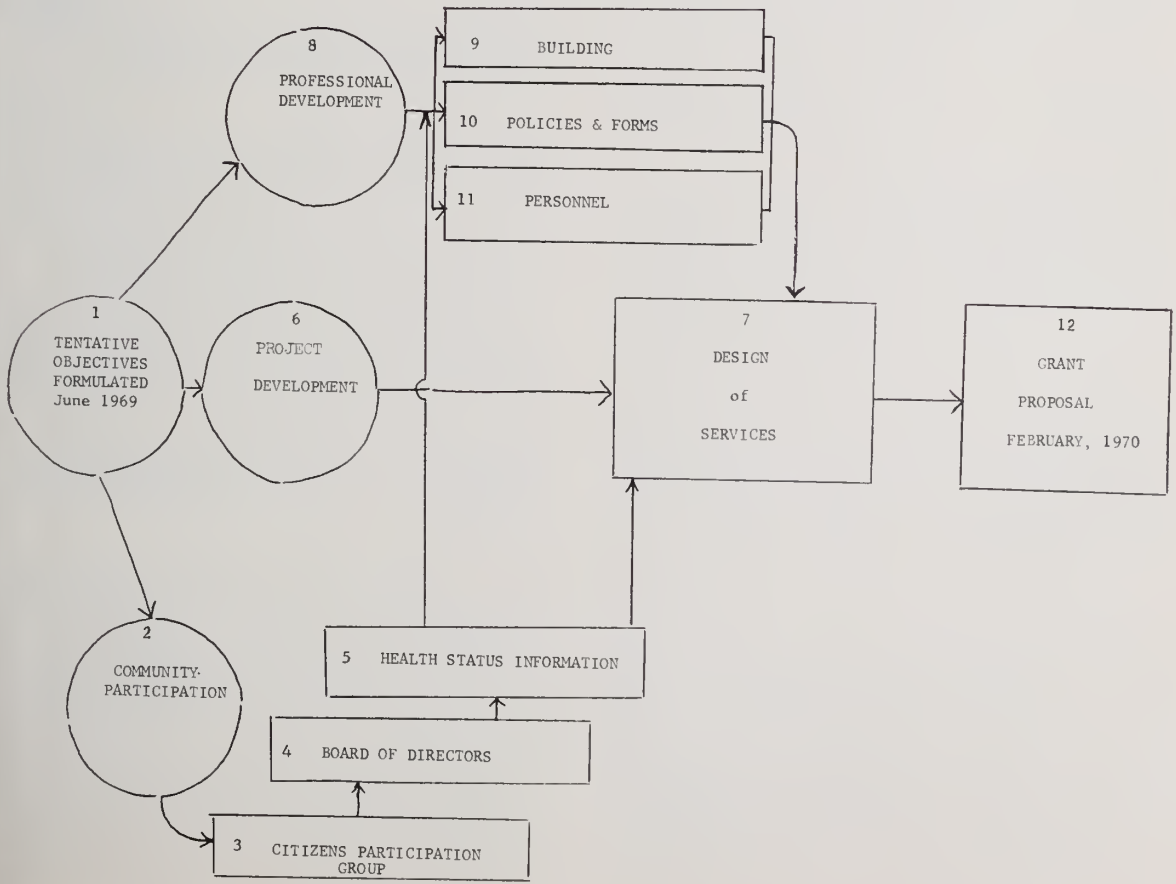
Parts one through three involve the planning phase, while four and five comprise the implementation phase. The author recognized these phases as the events that led to the opening of the clinic materialized. Chart I describes the planning phase step-by-step. The objectives of Step One include the objectives of the local people, as well as the objectives of the project developer. The objectives were to expand, as resources became available, from "locating a physician" to "demonstrating aspects of comprehensive medical care." This expanded objective meant helping to establish two physicians in Evarts who would be willing to work with nurse practitioners and to keep detailed clinical records in order to evaluate some new approaches to the delivery of medical care.

Planning Steps 2, 3, and 4: Understanding the community is all-important. It is important that health needs are known, and that leadership is tapped in order to bring together scarce resources. Community involvement insures the kind of interest in health and health education desirable for the area.[2] Additionally, the formation of a non-profit corporation permits the community to become eligible for health demonstration grant funds.

In Evarts, a list of several thousand Clover Fork residents' signatures was submitted in a 1968-1969 petition for a doctor. Several organizations were concerned. Each group is loyal to its causes, but tends to be somewhat distrustful of projects proposed by others. This

CHART I

PLANNING PHASE



conflict can be traced back to the days of labor organization in the coal fields.

In an effort to gain general public support for a clinic, a meeting was held in a school building in Evarts, in June, 1969. Efforts to inform the entire population were made by word of mouth, radio, and the newspaper. Tempers flared among some participants; general agreement proved unobtainable. An informal consensus of some lay persons and health professionals was for the Medical Committee of the City Council of Evarts to continue the search for a physician. The author worked with this committee in developing the Clinic.

Initial efforts included advertising for a physician through the Kentucky and American Medical Associations. After several months, the committee voted to submit a grant request to the Appalachian Regional Commission for funds to build a clinic suitable for the demonstration clinic. This model would be available to residents from the proposed University of Kentucky Family Practice Residency. Residents from the proposed Family Practice Residency at the Harlan Appalachian Regional Hospital might rotate there also.

Planning Steps 5, 6, and 7: With the formation of a corporation, serious attention could be given to the details of service design. Determination was made of the number of physicians that would be required, as well as the types of equipment and staff required. It was found that 9,000 persons live in the area, and that they generally obtained in-hospital services from the Harlan Appalachian Regional Hospital, 14 miles from Evarts.[3]

The results of two previous studies were also used in structuring the details of our design. The first study was done in the Department of Behavioral Science at the University of Kentucky several years ago.[4] The study population was some 100 physicians who had left practice in Eastern Kentucky. Most frequent reasons were:

1. Physician's wife was dissatisfied with isolation and small town life.

2. Dissatisfaction with public schools.

3. Physician felt excessive demands on his practice with inadequate resources resulted in deteriorating standards of care.

Since that time, Crawford and McCormick, working in Virginia, have interviewed physicians leaving primary care practice. More than 70 were found.[5] Measures that these physicians felt would be of benefit in enchancing a primary care practice included:

	Favored the Measure
Group Practice	96%
Residency Programs in Primary Practice	81%
Association with Residents and Medical Students	74%
Tax Incentives for Physicians Devoted to Primary Care	69%
Nurse Practitioners or Physician Assistants	66%
Prepayment or Guaranteed Income	49%
Direct Subsidy to the Practice from the Community	46%

After some consideration, our service objectives were determined. They are:

1. To demonstrate aspects of the relationship of a satellite facility to regional facilities.

   a. Project staff to be full time, but to be extension members of the regionally based group practice, the Daniel Boone Clinic, and to be active staff members of the Regional Hospital, the Harlan Appalachian Regional Hospital.

   b. Provision of full range primary medical care services within two years. (Primary medical care is defined as personal services given to children and adults when entering and being maintained in health care system settings. Such care includes general curative outpatient services, maternity care, the care of preschool age children; the care of school children; consultative clinics; special disease

clinics; dental care; home visiting; case work; and limited inpatient care.)

c. Cooperative attempt at full range of community health services within five years. (Community health services included health education, water and sewage control, housing sanitation, food and milk sanitation, and the collection of health statistics.)

d. Progressive decrease in inpatient utilization for five years.

2. To demonstrate good, acceptable, economical medical care.

a. Financially self-supporting by third year.

Other objectives related to education and evaluation were included. It is beyond the scope of this paper to detail evaluation methodology. The objectives include:

Education

1. On the job training of two nurse practitioners.

2. Staff to carry out at least one new undergraduate or lay person training program per year after the first year.

3. Clinic to provide formal training site for at least one new kind of professional postgraduate health worker per year for three years.

4. Provide the model practice for a Family Practice Residency.

Evaluation and Research

1. Establishment of pre-tested Ambulatory Service Data System during first year.

2. Evaluation of administrative application of data system during each year.

a. Utilization of services

b. Cost of services

3. Research to be updated yearly:

a. Utilization research

1) Characteristics of patients using services

2) Patterns of use

b. Quality of patient care research

1) Continuity of care

2) Standards of clinical performance

3) Result of treatment regimen

c. Epidemiological research

1) Diagnostic categories; frequency distribution by demographic variables

Planning Steps 8-11: We were able to assemble equipment and building space based upon the needs of our design. We were aided by our administrator, contracted on a part-time basis from the Appalachian Regional Hospitals. His skills and the consultant and purchasing services back-up of his organization were instrumental to an orderly start-up.

Step Nine involved locating a suitable building. The quarters initially consisted of four mobile units placed together with a 24x24 foot extension at one end. This structure has subsequently been enlarged.

Step Ten involved the development of a clinical records system that would meet administrative, medical care, and research needs. The Clinic utilizes the Weed system of "Problem Oriented Medical Records."[6]

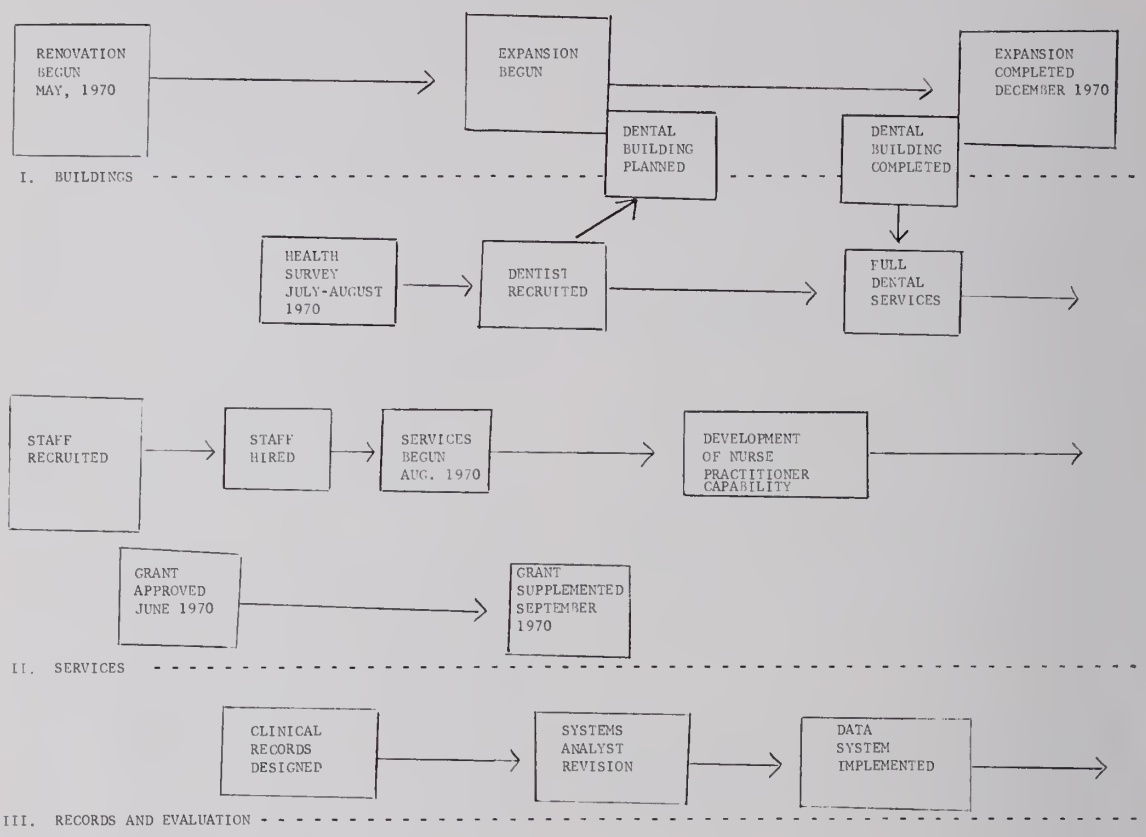
Implementation Phase

Development activities progressed while the grant request was being reviewed. Chart II exhibits the three areas of the implementation phase. The areas are: (I) Buildings, (II)

CHART II

IMPLEMENTATION PHASE

MAY-DECEMBER, 1970

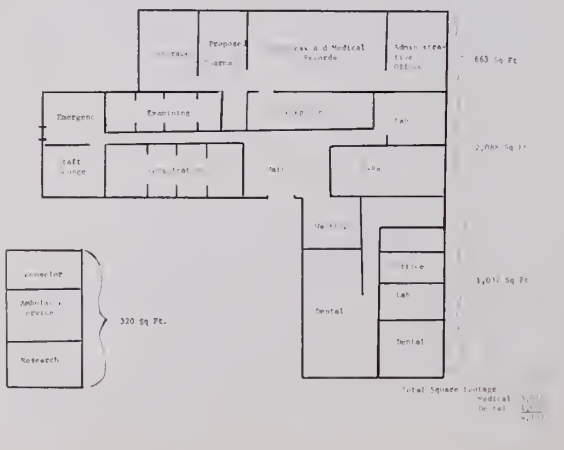


Services, and (III) Records and Evaluation. Implementation occurred during the months of May-December, 1970.

Work on renovation for a physician's office preceded the grant. The receipt of grant funds permitted the full demonstration so that additional space was required for expansion. A floor plan of the completed building is shown in Figure 2.

FIGURE 2

PRESENT PHYSICAL STRUCTURE
CLOVER FORK CLINIC



A physician was found. Two registered nurses were recruited; their past experience and continuing education are expected to provide the basis for expanded roles as nurse practitioners. A second physician joined the team in February, 1971.

A formal health survey, supported by the Ohio Valley Regional Medical Program, was completed during the summer of 1970. This information provided a baseline to measure future progress and to help identify area health problems. The survey underlined a great dental need. Accordingly, a dentist was located and the Board of Directors was successful in establishing a dental facility. This addition was accepted for funding by the Appalachian Regional Commission. The dental component

serves as a training clinic for the University of Kentucky College of Dentistry by means of liaison and consultation with the Department of Community Dentistry.

Much work has gone into the design of clinical records. The data are prepared for computer processing. Print-outs are obtained regarding the cost of services, grouping of patients by disease category, and utilization of the clinic by several payment groups. These print-outs implement the evaluation and research objectives above.

Discussion

This paper does not propose to evaluate performance, rather to describe the development of the clinic for the interest of those who are developing similar projects, and/or those who will be interested in the evaluation papers of the Clover Fork Clinic in the future.

We believe the clinic is operating today largely because it incorporates local needs and interests with those at wider levels. Local needs are for primary medical and dental care. Previous arrangements for medical and dental care had been inconvenient to the Valley and sometimes they were not obtained.[3]

County interests included those of health professionals in filling gaps in the delivery of care and in offering educational opportunity for professional students to study in the area. The clinic will serve as the model practice for residency programs in family medicine.

Interest at the state level includes that of the University of Kentucky College of Medicine and the Kentucky Medical Association. The Kentucky Medical Association's Committee on Education considered the clinic on January 24, 1971, at the third KMA Conference on Medical Education. It was discussed following the presentation, "The Role of the Medical Center in Practice Models for Experimentation in the Delivery of Medical Care." The KMA Committee on Appalachia and OEO Programs later visited the Clinic in April, 1971.

At the National level, interest and support for health programs comes through numerous and often unrelated channels.[7, 8] A potent channel for this part of Kentucky has been the Appalachian Regional Commission (ARC). The ARC grew out of President Kennedy's Appalachian Presidential Advisory Committee. Economists at the University of Pittsburgh were largely responsible for the content of the enabling legislation, the Appalachian Regional Development Act of 1965. Eighty percent of the money has been used for highway construction. A large part of the remainder has been used to sponsor health projects in several multi-county areas.[9, 10] In Kentucky, sixteen counties in the southeastern area of the state have worked to use these health funds for the past six years. The Clinic has used these funds to obtain initial start-up money. The operation is to be self-sustaining within three years.

Summary

The development of a demonstration medical practice is outlined. The process is one of a coalition—the bringing together of various interests that agree to work together to achieve common goals. The phases of development involve a series of steps necessary to meet the final objectives. Future evaluations will be submitted for publication.

Acknowledgement

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SPECIAL ARTICLES

Physicians and Hospital Governing Boards: A Kentucky Survey†

SAM D. WEAKLEY, M.D., AND E. TRUMAN MAYS, M.D.

Exiguous physician representation on hospital governing boards produces consequences most unfavorable to the general health and welfare of the public. Forty-one Kentucky hospitals have physicians on the governing boards and 38 have physician representatives with voting privileges.

AS medical costs hurtle toward awesome heights, physicians unjustifiably endure the frustration of bearing primary responsibility. The public sincerely believes that "doctors could control medical costs if they really wanted to." Hospital costs make up the major portion of health care expenses today. Physicians have very little control over hospital costs. As government designs major changes in systems for delivering health care to the nation, the physician's greatest impact in structuring these designs for the benefit of patient care will be through the basic unit of the health care delivery system (i.e., the hospital).

History

As early as 1953, the American Medical Association and the American Hospital Association through their Boards of Trustees, suggested that designated representatives of the medical staff have free and direct access to the governing board, with due consideration to the position of the administrator as chief executive officer of the hospital. A proposed step read: "Members of the medical staff can be members of the hospital governing board." In 1956, the AMA recommended such representation; and on numerous occasions since, the AMA House of Delegates has urged that voting membership on hospital governing boards be granted to medical staff representatives.

In November, 1967, the National Advisory Commission on Health Manpower offered: "We recommend that medical and hospital associations should jointly explore means to increase physicians' responsibility for the successful and economical management of hospital operations. These explorations should include consideration of providing physicians with a financial stake in the operations of the hospital, and of including physicians in the membership of hospital boards of control."

At the Board of Governors Meeting of the American College of Surgeons in Chicago, October, 1970, the timely issue of medical staff representation on hospital governing boards was discussed at length. Representatives of the American Urological Association, Inc. asked for endorsement of their official policy, adopted at their May, 1970, Philadelphia meeting. In summary, they requested support for requiring that hospital governing boards have 25 percent representation of practicing physicians who are members of the staff with voting privileges, and that such physicians be appointed by the boards from nominees suggested by the medical staff.[1]

The same group at their interim meeting in January, 1971, approved a resolution recommending to the American Medical Association and the American College of Surgeons that they seek from the Joint Commission on

†*From the Department of Surgery, University of Louisville School of Medicine, Health Sciences Center, Louisville, Kentucky 40201*

Read before the Fall Meeting of the Kentucky Chapter of the American College of Surgeons, September, 1971, Louisville, Kentucky

Accreditation of Hospitals, that as a requirement for certification, each department composing the medical board of a hospital be represented by a voting member on the governing board of the hospital; that these board members be selected from nominees in active practice, by members of each department concerned; that these two organizations be encouraged to enlist support of other organizations represented on the Board of Governors of the Joint Commission on Accreditation of Hospitals toward this end.

At the AMA Convention in Atlantic City, 1971, the House of Delegates urged that the Joint Commission on Accreditation of Hospitals require—when legally permissible—that the medical staff have voting representation on hospital governing boards. The House directed state and local medical societies to work to remove existing legal barriers to such representation. They further urged that hospital governing bodies and medical staffs be urged to develop mechanisms for resolving disputes internally, in accordance with the procedure for due process outlined by JCAH standards.[2]

The most recent Standards for Hospital Accreditation of the Joint Commission on Accreditation of Hospitals states: "Where legally permissible, physicians who are members of the medical staff shall be eligible for, and should be included in, full membership on hospital governing bodies and their active committees, in the same manner as are other knowledgeable and effective individuals. Other physicians also should be considered eligible for membership on the governing body."

The Board of Trustees of the Catholic Hospital Association approved the following: "Because of the physicians' importance to the operation of the hospital and because of the board's responsibility for quality care, it seems justifiable to include a physician(s) as a member of the board. His contribution as an active practitioner will help the board recognize the important role that medicine plays in a successful health care facility."

Kentucky Survey

Because of this increasing national interest in medical staff representation on hospital governing boards, a survey of Kentucky hospitals was initiated. A list of 68 nonfederal short-term general hospitals throughout Kentucky was obtained from the Kentucky Hospital Association, and the Chief of Staff of these hospitals was sent a questionnaire. It was necessary to repeat this procedure to 12 institutions for a return from 65 hospitals. The results are compared to a national survey conducted in March, 1969, by the Commission on Community Health of the Council on Medical Service of the American Medical Association (Table I).

TABLE I

PHYSICIAN REPRESENTATION ON HOSPITAL GOVERNING BOARDS

National Survey[2]		Kentucky Survey
1,183	Hospitals	68
976 (83%)	Response	65 (95%)
456 (47%)	Representation	41 (60%)
363 (37%)	Voting Privileges	38 (55%)
	President of Staff Invited	6 (9%)
	Inactive Physician Member	4 (6%)

The survey of Kentucky hospitals also showed the average size of the governing board to be 15 members. Twenty hospitals had at least one medical staff representative on the hospital governing board (Table II).

TABLE II

KENTUCKY SURVEY

Average Size of Governing Board 15
Range 4-40

Number of Hospitals	Number of Medical Staff Representatives
20	1
16	2
3	3
2	>3

Nationally, hospital size influenced greatly the number of physician members on governing boards, the larger hospital having less physician representation. Government institutions had the smallest number of physician representation (Table III).

TABLE III

PHYSICIAN REPRESENTATION ON HOSPITAL BOARDS: NATIONAL SURVEY

Geography

South Atlantic States	60%
West North Central States	30%
New England States	57%
East South Central States	39%
Mountain States	37%

Hospital Size

Under 25 beds	63%
25 to 100 beds	42% to 43%
100 to 500 beds	48% to 51%
500 plus beds	40%

Ownership

Proprietary	83%
Church Related	37%
Governmental	32%
No Church or Government Ties	53%

Comment

The need for hospital medical staff involvement in the total management of hospitals is apparent. The governing boards of these institutions dedicated to rendering health care to the public should have fair representation by the profession which must assume primary responsibility for the delivery of the same care.

As physicians admitting patients and prescribing services, we are responsible for much of the expenditures and income of hospitals and we have a responsibility to our patients to see that health care dollars are being wisely used.

The national hospital survey previously noted, demonstrated a definite positive relationship existing between the presence of a medical staff member on the governing board of a hospital and the existence of other indices of desirable medical care.

Hospital administrators recognize a need for improved systems of governance. Brown states: "As hospitals become more expensive, involved, and committed, the need for restructuring of their governance becomes imperative."[3]

The American College of Surgeons has been studying in depth the physician's role in controlling hospital costs and related medical costs. Rhoads' panel concluded:[4]

(1) Doctors have an important role in controlling costs of hospitalization and related medical care costs, but not the only role, nor indeed the largest.

(2) The need for physicians to be among those who serve on governing boards of hospitals is obvious.

(3) Those who do govern should insist on receiving adequate cost data so they can be effective in reducing costs and not simply accept recommendation from hospital administrators without analyzing the supporting evidence.

(4) Surgeons should combat *unnecessary use of laboratory tests, unnecessary hospitalization,* and *unnecessary hospital personnel.**

(5) Better financial support from third party payers for pre-hospitalization laboratory tests, x-rays, or other studies which would reduce the length of preoperative hospitalization.

(6) Changes in the criteria under which Medicare and Medicaid approve payment for treatment in extended care facilities has reduced the use of these facilities and delayed hospital discharges.

(7) The right of the patient to choose his physician might not always make for the greatest economy.

In Kentucky, the initial step of achieving recognition has not been too difficult, but further action is needed. Requiring board representation by staff physicians for accreditation by the JCAH seems necessary. Sixty percent representation of physicians on governing boards of Kentucky hospitals does not necessarily mean that physicians are being appropriately used or that the medical staff is optimally fulfilling its responsibility for assisting in total hospital management. Accepting such representation in management of hospitals, the physician has an explicit obligation to prepare himself knowledgeably for the task. He must acquire data and experience sufficient to participate intelligently in evaluating factors that influence operating, development, and management costs of hospitals.

It is only through such aggressive participation that physicians can fulfill their obligation to society to effectively control and, in appropriate instances, reduce the spiraling costs of health care systems.

Italics are the author's.

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1. Hannigan, R. J.: personal communication.
2. Rumsey, J. M.: Medical staff representation on hospital governing boards. CMS Report A, adopted by House of Delegates of the American Medical Association, June 20-25, 1970.
3. Brown, R. E.: Strictures and structures. *JAHA* 44:79-81, August, 1970.
4. Rhoads, J. E.: Role in controlling hospital costs and related medical care costs. *Bull. Am. Coll. Surg.* 56:29, April, 1971.

EDITORIALS

Medicare: Covered Care?

IN the March 1968 issue of *The Journal,* a special article was devoted to a discussion of services in hospitals and extended care facilities which are not covered by Medicare. Both before and since that article appeared, the Social Security Administration has published numerous articles, leaflets, memoranda, etc., for the information and guidance of physicians and other providers.

Like so much that crosses our desks, these items, if read at all, were promptly filed (usually in File 13) and forgotten. There remains a great deal of misunderstanding among physicians, and certainly among the elderly and their families, concerning just what does and does not constitute "covered care" under the Medicare **Law.**

It should be emphasized that the intermediary for Part A (Blue Cross in Kentucky) did not write the Medicare Law, nor did it draw up the regulations and guidelines. The intermediary's sole responsibility is to make certain that the beneficiary receives *all* of the benefits to which he is entitled under the law; but, at the same time, to also make sure that payment is not made for any services that are not covered. To make such judgements in a manner that is fair and equitable to all (patient, provider, and taxpayer), the intermediary must depend on records supplied by the physician and the facility.

Space, unfortunately, does not permit a detailed discussion, or examples, of covered and non-covered care. In capsule form, however, the basic considerations are as follows:

1. Hospital benefits are paid for acute hospital care, which is defined as care provided to the acutely ill, who, because of the severity of these conditions, require the continuing attention of skilled medical personnel, the constant availability of physicians, and complex or specialized medical services. Emphasis is on the words continuing and skilled. Assistance in the activities of daily living, i.e., help in walking, getting in and out of bed, bathing, eating, etc., and supervision over medication which can usually be self-administered, are considered "custodial care" and are not covered under the Medicare law.

2. ECF benefits are payable when the illness or injury for which the patient was hospitalized requires continued skilled nursing services following the period of acute hospital care. In order to qualify for ECF benefits, the individual must have been hospitalized for a minimum of three days, and the skilled services in the ECF must have been necessary within fourteen days following transfer from the hospital. With specific regulations such as these, within which the intermediary must make its judgements, the importance of adequate and carefully documented records becomes obvious.

3. Home Health services constitute the third important facet of Part A benefits. The basic guidelines here are that the patient is homebound and that he requires skilled nursing services or physical or speech therapy on an intermittent basis.

Although the vast majority of Medicare claims are processed routinely and payment promptly made, there are some which do not fit the guidelines, must be subjected to medical review, and be rejected in part or in toto. This is always a traumatic experience for the patient, the provider, and the physician. A review of the regulations and guidelines, to refreshen our memories, might be suggested as a means of alleviating these problems. The services of the intermediary staff are always available to explain and interpret the regulations for hospital staffs or county societies.

HENRY B. ASMAN, M.D.

ORGANIZATION SECTION

1972 Interim Meeting Scheduled For Somerset, April 13-14

The Medical Foundation Concept, Group Practice, and Health Care Costs are among the topics to be discussed at the 1972 Interim Meeting, April 13 and 14, at Somerset.

The Meeting will open at 9:30 am with a call to order by John S. Harter, M.D., Louisville, President of KMA. The program planned for Thursday will include a presentation on the Medical Foundation Concept and a panel discussion on the Kentucky Foundation for Medical Care, Inc., moderated by Henry B. Asman, M.D., Louisville, President of the Foundation.

There will not be any meetings scheduled for the afternoon of April 13, so that KMA members, their families, and guests can utilize the varied recreational facilities at Somerset. Special sports outings are being planned.

The Honorable Wendell H. Ford, Governor of Kentucky, has been invited to speak on, "Challenges to Medicine," at the Thursday evening dinner session.

Friday morning will feature talks on, "What's Happening in Health Care Costs," "HEW's View of the Health Care Industry," and "Group Practice." A panel discussion on, "Approaches to Rising Cost of Health Care," will be moderated by Lee C. Hess, M.D., Florence, President-Elect of KMA.

Among the distinguished guests who have been invited to speak at the Interim Meeting are: Mr. Joe Miller, Chicago, Assistant Executive Vice-President, AMA; Carl Hoffman, M.D., Charleston, West Virginia, AMA President-Elect; Mr. Frank Groschelle, Regional Director, HEW, Atlanta; and Mr. Jeffrey Cohelan, Executive Director, Group Health Association of America, Inc.

Closing remarks by Doctor Harter will conclude the program on April 14.

Other details of the Interim Meeting and reservation cards will be available in forthcoming issues of the KMA *Communicator.*

Price Commission to Allow 2.5% Raise in Fees

The Price Commission ruled December 15 that physicians, dentists, osteopaths, and other non-hospital providers of health services may not raise their fees more than 2.5 percent without prior approval and then only when such action is justified by higher costs.

Hospitals, nursing homes, and other health institutions, may increase prices up to 2.5 percent without approval, up to 6 percent after submitting cost justification to the government, and above 6 percent only with prior approval.

Mr. C. Jackson Grayson, Chairman of the Price Commission, said at a recent press conference, "Doctors will be required to post a sign in their office to the effect that a list of all charges is available. This will have to be done," he said, "whether or not the doctor increases or plans to increase his fees."

"The AMA supports President Richard Nixon's efforts to curb inflation and to hold price rises to an average 2.5 percent across the board," according to a telegram recently received by this Association from AMA. The telegram stated, "While we urge physicians to act in accordance with the regulations, we feel compelled to point out certain discriminatory aspects to them. Though we have not yet seen the official regulatory language, the guidelines for physicians' fees appear to single out health care providers for some regulatory controls that are not applied to other providers of services."

As is the usual policy of KMA, you will be kept informed through *The Journal* and *Communicator* of the latest developments in price controls that affect physicians. You are also urged to carefully review forthcoming issues of *American Medical News.*

KEMPAC Board Members Appointed For 1971-72

Harvey Page, M.D., Pikeville, was appointed to the KEMPAC Board of Directors at the December meeting of the KMA Board. John A. Logan, M.D., Henderson, was reappointed.

The following is a list of the KEMPAC Board members for the 1971-72 Organizational year:

First Congressional District
James B. Cox, M.D., Hopkinsville
John A. Logan, M.D., Henderson

Second Congressional District
John S. Oldham, M.D., Owensboro
Fred C. Rainey, M.D., Elizabethtown, Chairman

Third Congressional District
Cecil L. Grumbles, M.D., Louisville, Secretary-Treasurer
(one vacancy)

Fourth Congressional District
Carl Cooper, M.D., Bedford
C. Kenneth Peters, M.D., Louisville, Immediate Past Chairman

Fifth Congressional District
Donald C. Barton, M.D., Corbin
William O. Massey, M.D., Burnside

Sixth Congressional District
Carl H. Scott, M.D., Lexington
(one vacancy)

Seventh Congressional District
Jerry D. Fraim, M.D., Painstville
Harvey Page, M.D., Pikeville

Represent Woman's Auxiliary
Mrs. Hoyt D. Gardner, Louisville, Vice-Chairman
Mrs. William Pearson, Owensboro
Mrs. David B. Stevens, Lexington

Ex Officio Members
George P. Archer, M.D., Prestonsburg
Harold B. Barton, M.D., Corbin
Hoyt D. Gardner, M.D., Louisville
John C. Quertermous, M.D., Murray

Cardiovascular Lab Opened At Jewish Hospital

The Thomas Cardiovascular Laboratory of the University of Louisville School of Medicine is now in operation at Jewish Hospital, it was recently announced jointly by the hospital and the university.

The new laboratory, which was established at a cost of nearly $350,000, is a completely equipped and modern testing facility for use in diagnosis of cardiovascular (heart) diseases. The laboratory will be the diagnostic center for the Kentuckiana area for performing tests on adults suffering with heart disease.

Capabilities for testing and diagnosis provided by the addition of the new center are essential to the preoperative evaluation of patients considered likely to require open heart surgery, according to Robert Goodin, M.D., the Laboratory Director and Assistant Professor of Medicine at the school. "Without such a diagnostic facility, cardiovascular surgery, especially open-heart surgery, would virtually cease," Doctor Goodin said.

Open-heart operations on adults are now being done at Jewish by the U of L cardiovascular surgery team at the rate of about ten per month.

Most of the $350,000 cost of the new laboratory was for purchase of equipment. The balance was for renovation of the area within the hospital where the laboratory is located. The lab is temporarily situated on the basement level at Jewish, but will later be moved to the third floor as construction of the hospital's new addition, now underway, progresses.

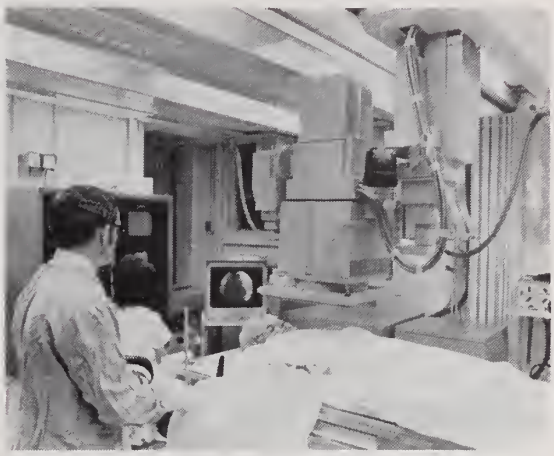
The laboratory was named in honor of the Lee B. Thomas family, which contributed a total of $200,000 toward its establishment.

A primary function of the laboratory is to determine the underlying physical conditions of patients who may need major cardiac surgery. Such studies help determine whether or not surgery is required and, if needed, the type of surgery indicated.

Even in cases where surgery is not required, studies at the laboratory will be helpful in determining the proper medications and therapeutic treatments needed.

Additional and essential functions of the laboratory are its use in the teaching program of the medical school. It will be used to provide training in the areas of cardiovascular physiology for both medical students and cardiology trainees. It will also be used in postgraduate training of physicians. Still other functions of the laboratory will include its use in the area of on-going cardiovascular research.

Statistics compiled by the American Heart Association indicated that heart disease is by far the biggest killer of any disease and is our nation's number one health problem.



By use of a catheter inserted into the patient's arm, dye is injected into a vein or artery to provide a contrast with the normal circulation of fluids in the body. This procedure allows the activities of the patient's heart to be photographed and the pictures transmitted to the television monitor at left so the activity can be viewed by the cardiologist and malfunctions detected immediately. Such activity is also recorded on video tape for permanent record.

Robert Goodin, M.D., Director of the new Thomas Cardiovasular Laboratory and Assistant Professor of Medicine at the University of Louisville School of Medicine, is shown performing the diagnostic procedure while technician Carole Jung is operating controls on the electronic recorder used to record various pressures essential to the data collected during cardiac catherization.

Pediatricians Elect Officers

The Kentucky Chapter, American Academy of Pediatrics, elected Noble MacFarland, M.D., Lexington, as Chairman at a recent meeting. He succeeds Guy C. Cunningham, M.D., Ashland.

Also elected were Robert Bergie, M.D., Lexington, Vice-Chairman, and Tom Courtney, M.D., Louisville, Secretary-Treasurer.

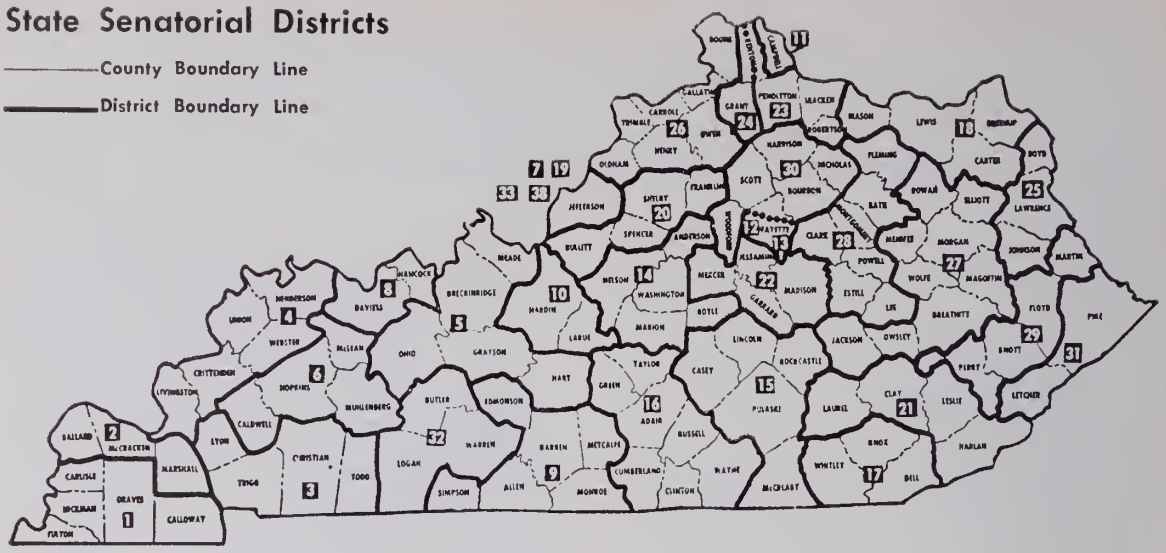
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State Senatorial Districts

———County Boundary Line

———District Boundary Line



Ky. Senate and House Rosters Listed for 1972 Assembly

In order that you might have a complete list of the 38 Senators and 100 Representatives who will participate in the 1972 Kentucky General Assembly, *The Journal* is once again printing their names, home towns and districts, and including maps to show the counties they will serve.

Twenty-seven of the Senators are Democrats, and 11 are Republicans. In the Senate there will be 11 new members. The House is composed of 73 Democrats and 27 Republicans. Of the total membership, 38 of the Representatives are new.

Kentucky General Assembly 1972 Senate Roster

District	Home County	Senators
1	Graves	Carroll Hubbard, Jr. (D), Mayfield
2	McCracken	Tom Garrett (D), Paducah
3	Christian	Pat M. McCuiston (D), Pembroke
4	Henderson	William L. Sullivan (D), Henderson
5	Grayson	Damon Majors (D), Caneyville
6	Hopkins	William A. Logan (D), Madisonville
7	Jefferson	William L. Quinlan (D), Louisville
8	Daviess	Delbert S. Murphy (D), Owensboro
9	Barren	Walter A. Baker (R), Glasgow
10	Hardin	Walter "Dee" Huddleston (D), Elizabethtown
11	Campbell	Donald L. Johnson (R), Ft. Thomas
12	Fayette	C. Gibson Downing (D), Lexington
13	Fayette	Michael R. Moloney (D), Lexington
14	Nelson	William R. Gentry (D), Bardstown
15	Pulaski	Norman E. Farris (R), Somerset
16	Clinton	James A. Hicks (R), Albany
17	Bell	Denver C. Knuckles (R), Middlesboro
18	Lewis	Luther Plummer (R), Vanceburg
19	Jefferson	Tom Mobley (D), Louisville
20	Shelby	Mack G. Walters (D), Shelbyville
21	Laurel	Gene Huff (R), London
22	Mercer	Edwin Freeman (D), Harrodsburg
23	Kenton	August "Gus" Sheehan (D), Covington
24	Kenton	Clyde W. Middleton (R), Ft. Mitchell
25	Johnson	Roy R. Ross (D), Paintsville
26	Carroll	Thomas O. Harris (D), Worthville
27	Morgan	Joe D. Stacy (D), West Liberty
28	Powell	B. E. "Nig" Billings (D), Stanton
29	Knott	John C. Cornett (D), Mallie
30	Harrison	Wilson Palmer (D), Cynthiana
31	Pike	Kelsey E. Friend (D), Pikeville
32	Warren	Ray B. White (R), Bowling Green
33	Jefferson	Georgia M. Davis (D), Louisville
34	Jefferson	Walter S. Reichert (R), Louisville
35	Jefferson	Lacey T. Smith (D), Louisville
36	Jefferson	Scott Miller, Jr. (R), Louisville
37	Jefferson	Arthur D. Yocom (D), Louisville
38	Jefferson	Nicholas Baker (D), Louisville

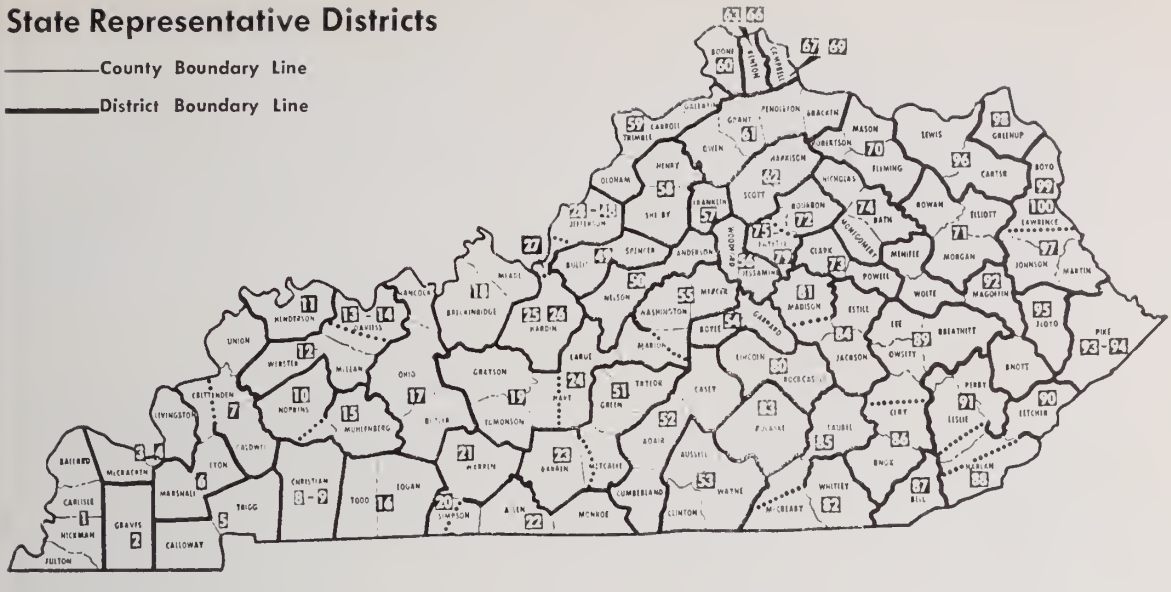
Kentucky General Assembly 1972 House Roster

District	Home County	Representatives
1	Carlisle	Ralph E. Graves (D), Bardwell
2	Graves	Lloyd E. Clapp (D), Wingo
3	McCracken	Fred Morgan, Sr. (D), Paducah
4	Livingston	George F. Harris (D), Salem
5	Calloway	Kenneth C. Imes (D), Almo
6	Marshall	Richard H. Lewis (D), Benton
7	Union	Joseph McBride (D), Waverly
8	Christian	John O. Hardin, III (D), Hopkinsville
9	Christian	James E. Bruce (D), Hopkinsville
10	Hopkins	Omar Parish, Jr. (D), Madisonville
11	Henderson	Gross C. Lindsay (D), Henderson
12	Webster	Joe Head (D), Providence
13	Daviess	Charles S. Wible (D), Owensboro
14	Daviess	Donald J. Blandford (D), Philpot
15	Muhlenberg	Billy R. Paxton (D), Central City
16	Todd	George Street Boone (D), Elkton
17	Ohio	Theron Kessinger (R), Beaver Dam
18	Meade	Willis G. Moreman (D), Brandenburg
19	Grayson	J. T. Skaggs (R), Leitchfield

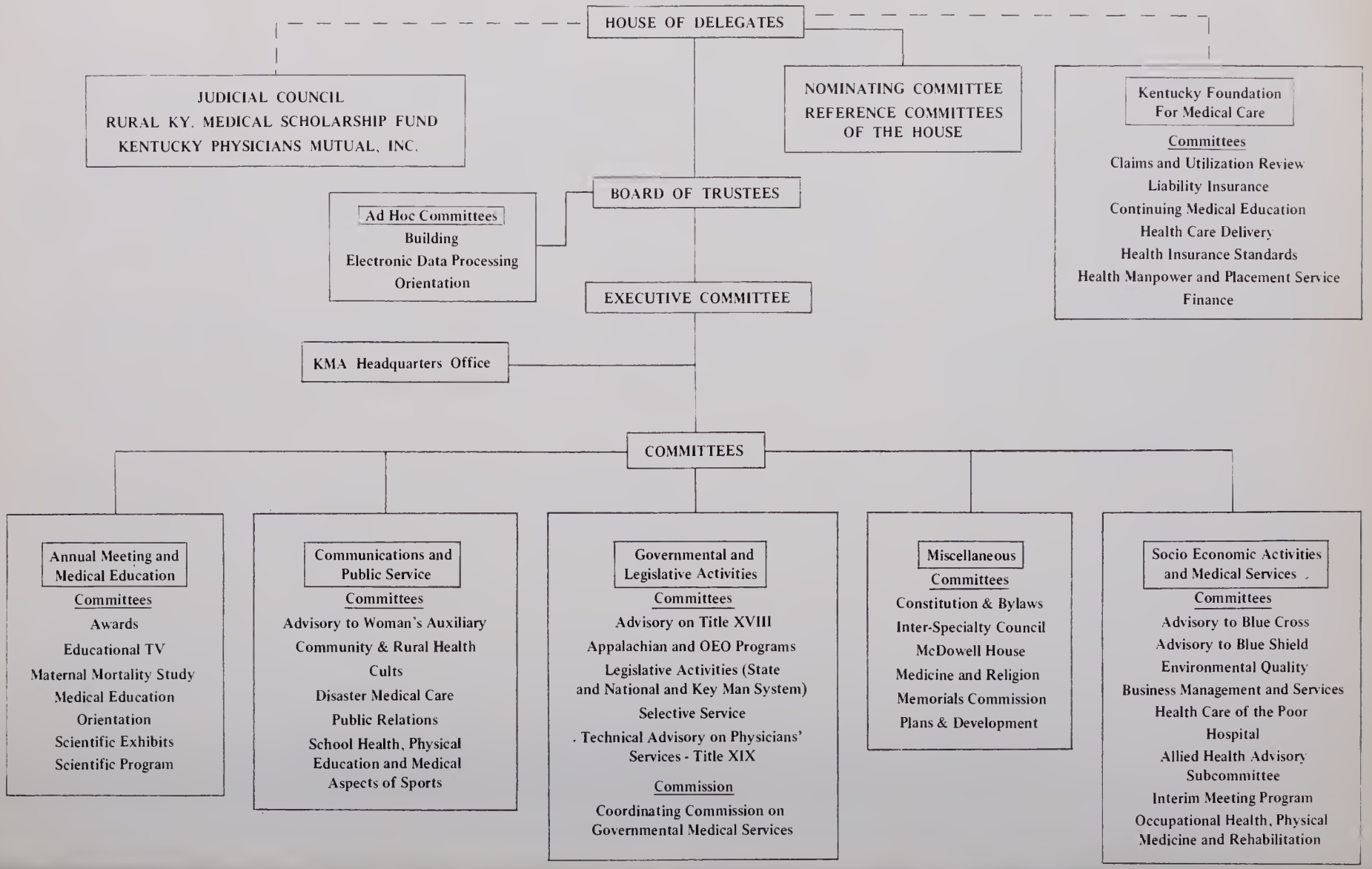
State Representative Districts

———County Boundary Line

———District Boundary Line



20	Warren	Nicholas Z. Kafoglis, M.D. (D), Bowling Green
21	Warren	Edward G. Brown (D), Bowling Green
22	Allen	T. C. Simmons (R), Scottsville
23	Barren	Bobby H. Richardson (D), Glasgow
24	Marion	Sam B. Thomas (D), Lebanon
25	Hardin	Sam H. Watkins (D), Elizabethtown
26	Hardin	Joseph W. Prather (D), Vine Grove
27	Jefferson	William J. Lile (R), Valley Station
28	Jefferson	James R. Dunn (D), Louisville
29	Jefferson	Jesse O. Johnson (R), Louisville
30	Jefferson	Thomas J. Burch (D), Louisville
31	Jefferson	Stanley A. Searcy (R), Jeffersontown
32	Jefferson	E. Bruce Blythe, Jr. (R), Louisville
33	Jefferson	Peter Conn (D), Louisville
34	Jefferson	David K. Karem (D), Louisville
35	Jefferson	Carl A. Nett (D), Louisville
36	Jefferson	Frank X. Quickert, Jr. (D), Louisville
37	Jefferson	M. Jerry Kleier (D), Louisville
38	Jefferson	Dexter S. Wright (R), Louisville
39	Jefferson	Lawrence Ray Maynard (D), Louisville
40	Jefferson	George R. Siemens (D), Louisville
41	Jefferson	Mae Street Kidd (D), Louisville
42	Jefferson	Charlotte S. McGill (D), Louisville
43	Jefferson	Norbert Blume (D), Louisville
44	Jefferson	James R. Yocom (D), Louisville
45	Jefferson	Dottie Priddy (D), Louisvlle
46	Jefferson	Robert F. Hughes (D), Louisville
47	Jefferson	Edward L. Holloway (R), Louisville
48	Jefferson	Eugene P. Stuart (R), Louisville
49	Spencer	Stuart Kelly (D), Taylorsville
50	Nelson	Bernard Keene (D), Bardstown
51	Taylor	Herman W. Ratliff (R), Campbellsville
52	Casey	Raymond Overstreet (R), Liberty
53	Wayne	Randolph Smith (R), Monticello
54	Boyle	Joe Clarke (D), Danville
55	Mercer	Forest "Aggie" Sale (D), Harrodsburg
56	Woodford	Victor Hellard, Jr. (D), Versailles
57	Franklin	Kenneth C. Wood (D), Frankfort
58	Henry	Louis T. Peniston (D), New Castle
59	Carroll	W. J. Louden (D), Carrollton
60	Boone	William K. McBee (D), Burlington
61	Grant	E. Tommy Reed (D), Corinth
62	Harrison	John Swinford (D), Cynthiana
63	Kenton	W. L. Schmaedecke (R), Fort Mitchell
64	Kenton	Phillip E. King, Sr. (D), Fort Mitchell
65	Kenton	John J. Isler (D), Covington
66	Kenton	Carl J. Mershon (D), Ludlow
67	Campbell	James E. Murphy (D), Newport
68	Campbell	William Donnermeyer (D), Bellevue
69	Campbell	Arthur Schmidt (R), Cold Spring
70	Mason	Austin Wenz (D), Dover
71	Morgan	Woodford F. May (D), Woodsbend
72	Bourbon	Brooks Hinkle (D), Paris
73	Clark	Glenn White (D), Winchester
74	Bath	Charles B. Hart (D), Owingsville
75	Fayette	William Kenton (D), Lexington
76	Fayette	Bart M. Peak (D), Lexington
77	Fayette	David L. Van Horn (D), Lexington
78	Fayette	Larry J. Hopkins (R), Lexington
79	Fayette	Joe Graves (R), Lexington
80	Lincoln	William Harold DeMarcus (R), Stanford
81	Madison	Dwight Wells (D), Richmond
82	Whitley	Clifford M. Sharpe (R), Williamsburg
83	Pulaski	Lavey Floyd (R), Pointer
84	Estill	Sam Brewer, Jr. (R), Irvine
85	Laurel	Albert Robinson (R), Pittsburg
86	Knox	Howard West (R), Artemus
87	Bell	John W. Rowland (R), Pineville
88	Harlan	Bert Ed Pollitte (D), Harlan
89	Breathitt	Jeff D. Howell (D), Jackson
90	Letcher	Rudolph Williams (D), Mayking
91	Perry	Chester Jones (D), Hazard
92	Magoffin	Darvin Allen (D), Royalton
93	Pike	J. C. Justice (D), Pikeville
94	Pike	Marrs Allen May (D), Pikeville
95	Floyd	W. J. Reynolds (D), Allen
96	Carter	James A. Davis (R), Grayson
97	Martin	Lucian T. Hardin (R), Inez
98	Greenup	W. Terry McBrayer (D), Greenup
99	Boyd	Thomas E. Chapman (D), Rush
100	Boyd	Charles R. Holbrook, III (R), Ashland



K.M.A. Organization Chart — Revised November 1971

KMA Committees and Commissions for the 1971-72 Associational Year

ANNUAL MEETING ACTIVITIES

Scientific Program Committee

R. Glenn Greene, M.D., Owensboro, Chairman
John L. Duhring, M.D., Lexington
John S. Harter, M.D., Louisville
Lee C. Hess, M.D., Florence
Allan M. Lansing, M.D., Louisville
Nicholas J. Pisacano, M.D., Lexington
Charles Sachatello, M.D., Lexington

Scientific Exhibits Committee

Arnold C. Williams, M.D., Lexington, Chairman
Bernard Weisskopf, M.D., Louisville
Jonathan D. Wirtschafter, M.D., Lexington
Miss Joan Titley, Louisville, Advisor

Awards Committee

Douglas E. Scott, M.D., Lexington, Chairman
David M. Cox, M.D., Louisville
Sam A. Overstreet, M.D., Louisville
W. Vinson Pierce, M.D., Covington
Clyde C. Sparks, M.D., Ashland

MEDICAL EDUCATION AND HOSPITALS

Hospital Committee

Oscar W. Thompson, Jr., M.D., Pikeville, Chairman
Royce E. Dawson, M.D., Owensboro
Lewis Dickinson, M.D., Glasgow
Ellis A. Fuller, Jr., M.D., Louisville
W. Faxon Payne, M.D., Hopkinsville
Charles C. Rutledge, M.D., Hazard
William R. Yates, M.D., Ft. Mitchell

Allied Health Advisory Subcommittee

Lewis Dickinson, M.D., Glasgow, Chairman
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1. Demeulenaere, L.: Action du R 1132 sur le transit gastro-intestinal, Acta gastroent. Belg. 21:674-680 (Sept.-Oct.) 1958.

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Overdosage: The medication should be kept out of reach of children since accidental overdosage may cause severe, even fatal, respiratory depression.

Dosage: The recommended average initial daily dosages, given in divided doses until diarrhea is controlled, are as follows:

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3-6 mo.... ½ tsp.* t.i.d. (3 mg.)
6-12 mo.... ½ tsp. q.i.d. (4 mg.)
1-2 yr..... ½ tsp. 5 times daily (5 mg.)
2-5 yr..... 1 tsp. t.i.d. (6 mg.)
5-8 yr..... 1 tsp. q.i.d. (8 mg.)
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ecovered. Before initiating therapy,
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ntigenicity with these compounds.
lowever, hypersensitivity reactions
ave been reported, some of these in
atients known to be sensitive to
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travenous infusions have not
roduced local irritation or phlebitis,
hen given as recommended. Lincocin
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e hypersensitive to other drugs.
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utiously in patients with asthma or
gnificant allergies.

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e recommended dose of Lincocin
ould be reduced to 25—30% of
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dney function. Its safety in
egnant patients and in infants
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t been established.

ncocin may be used with other
timicrobial agents: Since Lincocin
stable over a wide pH range, it is
itable for incorporation in
ravenous infusions; it also may be
administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



972 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatmen *Skin and mucous membranes*—Skin rashe urticaria, vaginitis, and rare instances of e: foliative and vesiculobullous dermatitis ha been reported. *Liver*—Although no direct r lationship to liver dysfunction is establishe jaundice and abnormal liver function tes (particularly serum transaminase) have be observed in a few instances. *Cardiovascul* —Instances of hypotension following pare teral administration have been reporte particularly after too rapid IV administr tion. Rare instances of cardiopulmonary a rest have been reported after too rapid l administration. If 4.0 grams or more admi istered IV, dilute in 500 ml of fluid a administer no faster than 100 ml per ho *Special senses*—Tinnitus and vertigo ha been reported occasionally. *Local reactio* —Excellent local tolerance demonstrated intramuscularly administered Lincoc (lincomycin hydrochloride). Reports of p following injection have been infreque Intravenous administration of Lincocin 250 to 500 ml of 5% glucose in distill water or normal saline has produced local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *500* Capsules—bottles of 24 and 100. *Ster Solution, 300 mg per ml*—2 and 10 ml vi and 2 ml syringe. *Syrup, 250 mg per 5* —60 ml and pint bottles.

For additional product information, cons the package insert or see your Upjo representative.

MED B-6-S (KZL-7) JA71-16

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Kalamazoo, Michigan 49001

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1972 KMA Interim Meeting

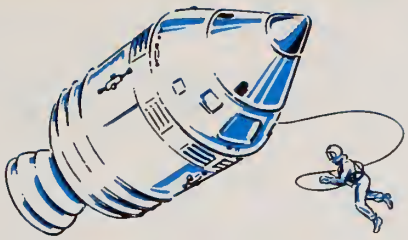
APRIL 13-14

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Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

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NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

IN ASTHMA
IN EMPHYSEMA



optional therapy



THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

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Manufacturers of Ethical Pharmaceuticals

The girth control pill



Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug, in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets. One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.). TEPANIL. One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

1-3325 (2876)

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

Painful night leg cramps...



unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

- □ Prevents painful night leg cramps
- □ Permits restful sleep
- □ Provides simple convenient dosage— usually just one tablet at bedtime

Prescribing Information—Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diabetes, varicose veins, thrombophlebitis, arteriosclerosis and static foot deformities. **Contraindications:** Quinamm is contraindicated in pregnancy because of its quinine content. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rash, or visual disturbances occur. **Dosage:** One tablet upon retiring. Where necessary, dosage may be increased to one tablet following the evening meal and one tablet upon retiring. **Supplied:** Bottles of 100 and 500 tablets.

Merrell

MERRELL-NATIONAL LABORATORIES 1-3508(3050)
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

Trademark: Quinamm

Quinamm

(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps.

Old winner, new bottle.



DBI® phenformin HCl tablets of 25 mg.
DBI-TD® phenformin HCl capsules of 50 and 100 mg.

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.
Contraindications: Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); during or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); after disease states associated with hypoglycemia.
Warnings: Use during pregnancy is to be avoided.
Precautions: 1. *Starvation Ketosis:* This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**
2. *Lactic Acidosis:* This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediatcly upon the appearance of any metabolic acidosis.
3. *Hypoglycemia:* Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.
Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has becn reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake.
(B)98-146-103-C

For complete details, including dosage, please see full prescribing information.

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DBI-8345-9

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A gratifying announcement about Empirin® Compound with Codeine



You may now specify up to five refills within six months when you prescribe Empirin Compound with Codeine (unless restricted by state law).

It is significant in this era of increased regulation, that Empirin Compound with Codeine has been placed in a less restrictive category. You may now wish to consider Empirin with Codeine even more frequently for its predictable analgesia in acute or protracted pain of moderate to severe intensity.

Empirin Compound with Codeine No. 3 contains codeine phosphate* (32.4 mg.) gr. ½. No. 4 contains codeine phosphate* (64.8 mg.) gr. 1. *(Warning—may be habit-forming.) Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.

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THE AMPICILLIN DERIVATIVE

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BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201

Call it what you will, it may be premalignant.

Before

3/29/67 Before therapy with 5%-FU cream. Patient P. T. shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

After

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.



ROCHE Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

and Efudex® (fluorouracil) 5% cream can resolve it.

Call it actinic, solar or senile keratoses, many regard it as "precancerous."[1,2]

Topical fluorouracil, considered by some dermatologists to be a major advance in the treatment of multiple solar keratoses,[3,4] offers the physician a relatively inexpensive alternative to cryosurgery, electrodesiccation and cold knife surgery. Of the topical fluorouracils available, only Efudex offers 2% and 5% solution and 5% cream formulations—formulations that have proved effective in the treatment of these mutliple lesions.

Usual duration of therapy, 2 to 4 weeks.

Studies showed that with the 2% and 5% Efudex preparations, the usual duration of therapy was only 2 to 4 weeks.[5] Other studies with topical fluorouracil revealed that when concentrations of less than 2% were used, significant numbers of lesions recurred.[6]

Treats the lesions you can't see, too.

Numerous lesions, not apparent prior to 2% and 5% Efudex therapy, manifested themselves by definite reactions, while intervening skin remained relatively unaffected.[5] The early eradication of these subclinical lesions (which may otherwise have undergone further progression) probably accounts for the reduced incidence of future solar keratoses in patients treated with topical fluorouracil—especially with 5% concentrations.[6]

How to identify solar keratoses.

Typically, the lesion—a flat or slightly elevated brown to red-brown papule—is dry, rough, adherent and sharply defined. Multiple lesions are the rule.

Predictable therapeutic response.

The response to a typical course of Efudex therapy is usually characteristic and predictable. After 3 or 4 days of treatment, erythema begins to appear in the area of keratoses. This is followed by a moderate to intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of this response generally occurs two weeks after the start of therapy and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. Lesions that do not respond should be biopsied.

References: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Grune & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T., and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. 3. Belisario, J. C.: *Cutis, 6*:293, 1970. 4. Sams, W. M.: *Arch. Derm., 97*:14, 1968. 5. Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and Klein, E.: *Cancer, 25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

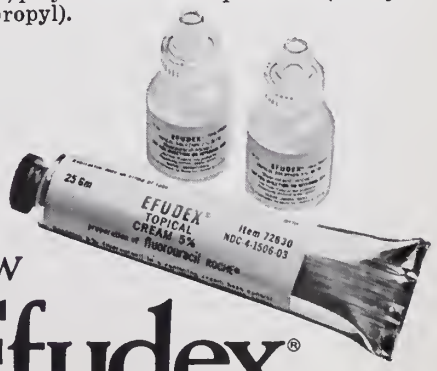
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

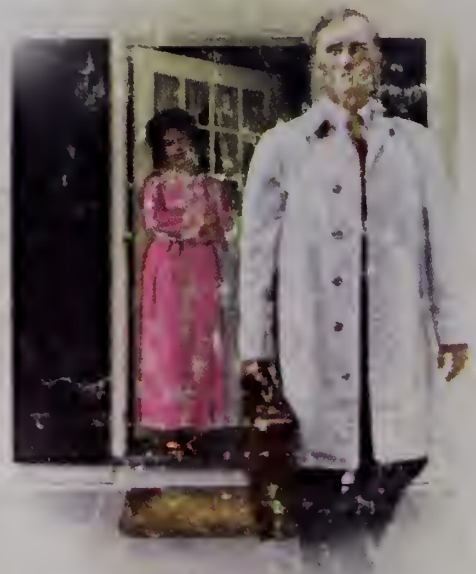
How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



now **Efudex®** (fluorouracil) cream/solution

When he goes back to work, will his old tensions go back with him?



When it's mandatory to keep the post-coronary patient calm, consider Valium® (diazepam).

Although he's promised to take it easy back on the job, you know he's going back to the same stressful circumstances that may have contributed to his hospitalization. Your prescription for Valium can calm him. Lessened anxiety and tension can help in decelerating his former pace. During the period of readjustment Valium helps quiet undue anxiety.

For moderate states of psychic tension, 5-mg or 2-mg Valium tablets *t.i.d.* or *q.i.d.* can usually provide reliable relief. For severe tension/anxiety states, the 10-mg tablets often produce desired results.

The most commonly reported side effects are drowsiness, ataxia, and fatigue. Until individual response is determined, caution patient against driving or operating dangerous machinery.

Valium® (diazepam)

For the tense cardiac patient who must be kept calm

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose™ packages of 1000.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

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The Journal of The KENTUCKY Medical Association

COLLEGE OF PHYSICIANS
FEB 2 2 1972



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1972 KMA INTERIM MEETING
April 13-14
Somerset, Kentucky

Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. *Important Note:* Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media for patients already taking sulfonamides. Increasing frequency of resistant organisms currently is a limitation of the usefulness of antibacterial agents. Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 12 to 15 mg/100 ml is considered optimal for serious infections; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established, and teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis, a frequently dose-related reaction, may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *allergic reactions:* erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *gastrointestinal reactions:* nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; and *miscellaneous reactions:* drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infection is 4 tablets initially, then 2 tablets morning and evening. If pain persists beyond seven days, causes other than infection should be sought. After relief has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

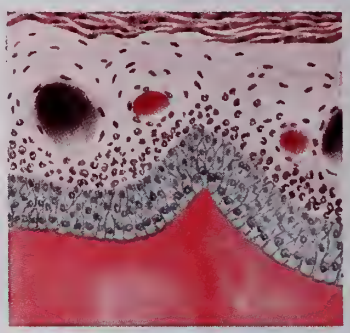
NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl, bottles of 100 and 500.

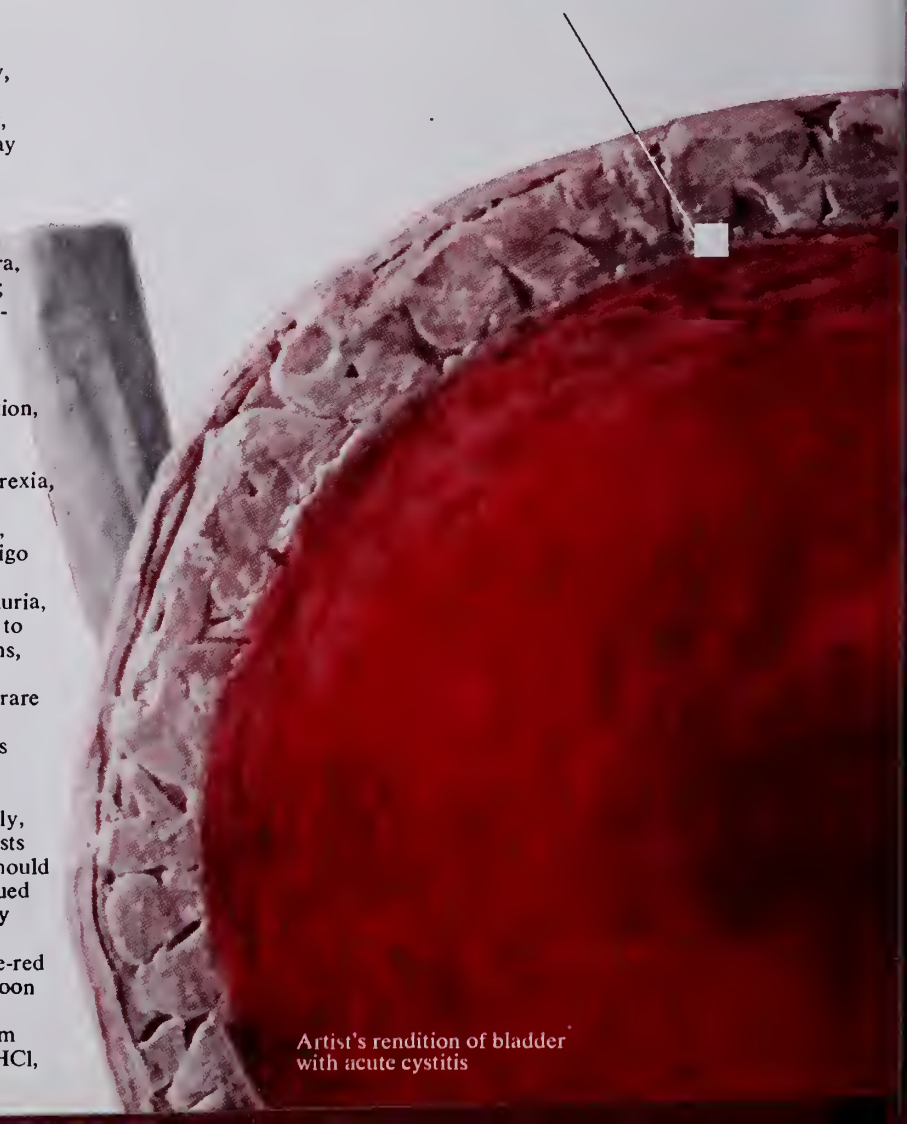
Azo

Each tablet contains 100 mg phenazopyridine HC

for dramatic relief from symptoms within minutes



Artist's rendition of inflamed mucosa of the bladder wall

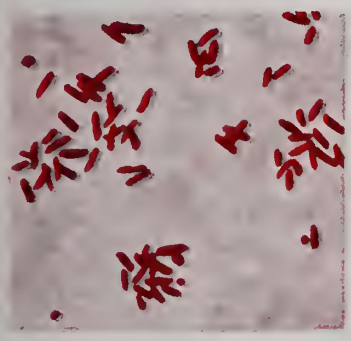


Artist's rendition of bladder with acute cystitis

Gantanol®

nd 0.5 Gm sulfamethoxazole.

for effective antibacterial action within hours



Artist's rendition of *E. coli*



Rapid relief of discomfort

The patient needs prompt relief of urinary bladder pain and the physician needs to initiate early antibacterial action to fight the infection. This is where the basic therapy of dual-action Azo Gantanol® can help... the analgesic action of Azo (phenazopyridine HCl) for prompt relief from bladder pain and the effective action of Gantanol® (sulfamethoxazole) to control the bladder infection.

Antibacterial blood/urine levels in from 2 to 3 hours

With the initial 2-Gm dose, the analgesic action of the Azo component starts immediately to relieve the symptoms associated with an infected and inflamed bladder. In from 2 to 3 hours, as effective antibacterial blood and urine levels are reached, the Gantanol action begins to control the bacteria most often implicated in acute infections of the bladder... susceptible *E. coli* as well as susceptible strains of *Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis,* and, less frequently, *P. vulgaris.* The usual precautions in sulfonamide therapy, including maintenance of adequate fluid intake, should be observed. The most common side effects are nausea, vomiting and diarrhea.

12 hours of therapy with every dose

Subsequent *b.i.d.* doses of 1 Gm, morning and evening, maintain effective antibacterial coverage on a round-the-clock basis. With every dose, Azo Gantanol helps relieve the symptoms of cystitis while it fights the infection.

In acute painful nonobstructed cystitis

Azo Gantanol®

Each tablet contains 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl.

basic therapy

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110



An important symbol to recognize

The double-pointed red arrow is the symbol for the new BLUE SHIELD®' RECIPROCITY SYSTEM. It's a national claims processing system for paying Blue Shield claims for eligible out-of-state subscribers. The new system becomes effective March 1, 1972.

The double-pointed arrow, carrying a number within it, will be found in the upper left-hand corner of the subscriber's identification card. Simply fill out the familiar Kentucky Blue Shield claim form, indicate the number within the arrow as a prefix to the subscriber's certificate number and send it to Kentucky Blue Shield for processing.

Initially, only certain employee groups will have benefits under this system.

A general mailing is being sent to all Kentucky physician's offices providing specific details about the program. Questions regarding the new system should be directed to the Professional Relations Division.

BLUE SHIELD®'

KENTUCKY PHYSICIANS MUTUAL, INC.
FOR SURGICAL-MEDICAL CARE

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Volume 70 • February 1972

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Journal of The KENTUCKY *Medical Association*

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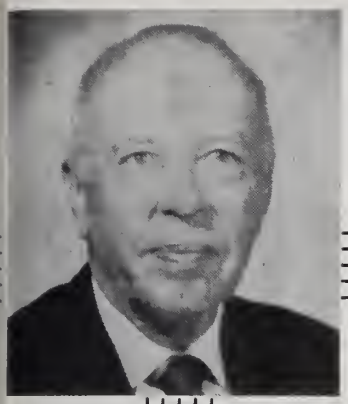
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MESSAGE FROM THE PRESIDENT



Fees

HOW did we get into this mess? The doctors claim they are not being paid enough. The consumers are clamoring about the high cost of medical care. Whatever the charges are, they are frozen as of August, 1971. Your fee as of December 15 may be raised 2½% or more if you convince the IRS that higher fees are justified. And don't forget that little sign that a list of fees are available on demand that must be posted in the waiting room.

Here is how it happened. In 1968, the KMA House of Delegates passed a resolution that reaffirmed KMA's support of the principle of payment of physicians' fees on a usual and customary basis by a third party (insurance). A fee survey was conducted. From this, survey data was gathered and statistical guidelines were developed enabling insurance or third parties to pay usual and customary fees.

Each physician's fees were recorded for each service. Physicians in the same neighborhood usually charged about the same fee for service. This is what set up the geographical areas that are so much detested. Some rural geographic areas in the State charge more for certain services than are charged in Jefferson and Fayette counties, and they are paid by the third parties because that was set up as usual and customary in that area by the doctors' fees.

Fees are paid by third parties if they are in the 90 percentile. The 90th percentile is that charge within the range of a given procedure that will pay in full at least 90% of all physicians' charges and at least 90% of all the cases filed.

John S Harter

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 21-year-old married, Gravida 2, Para 2 was under the care of a private physician. She was admitted to the hospital complaining of nosebleed, cough, and weakness on 11/11/69. Three days prior to this admission she developed a cough, but was not seen by her private physician. The cough became worse and she began wheezing. On the day of admission, she started bleeding from the nose and was seen in the office by her physician. She was admitted to the hospital for further treatment. She was approximately seven and a half months pregnant at this time.

The patient's temperature on admission was 98. Her pulse was 88, respirations 24, weight 140. Blood pressure was 120/90. She was admitted to the hospital at 10:50 am from the Emergency Room by wheelchair. An oxygen tent was set up, and the patient appeared short of breath and vomited a moderate amount of bright red blood and old blood.

Physical examination on admission to the hospital revealed her to be a well-developed, well-nourished white female in no acute distress. The patient had a complete cleft palate and had some bleeding from the turbinates in the nose. The bleeding was not active at this time. The mucous membrane was otherwise normal. The tympanic membrane was clear. Neck was supple. The thyroid was not palpable. Chest examination revealed inspiratory rales and expiratory wheezes throughout both lungs. There was tachycardia, with a pulse of 90. No murmurs were heard. Abdominal exam revealed the uterus palpable above the umbilicus, compatible with seven and a half months gestation. Fetal heart was not heard at this time; however, the baby was moving. There were no other masses felt in the abdomen. Pelvic exam was not done. The extremities were not remarkable.

Impression: Acute asthmatic bronchitis.
Infection of the posterior nasopharynx with secondary bleeding.

An ENT consultant was called to see the patient. Her hematocrit on admission was 42% with a hemoglobin of 14.2 grams, white count 15,000 with 91 neutrophiles, 4 stabs, and 3 lymphs, and 2 monos. She had slight anisocytosis, normo-chromic. The platelets were normal. Urine: Albumin negative, sugar negative, no bacteria, 1-2 white cells on a clean-catch specimen, specific gravity 1.015.

She was sent to x-ray. Chest x-ray on a six foot film indicated cardiac enlargement, generalized haziness in both lung fields, with marked increased vascularity and curly B-lines and fluid in the fissures; dense consolidation at the left base and left upper lobe area was noted.

Conclusion: Cardiac enlargement with congestive failure. There may be some superimposed pneumonia. (Her physician was not aware of the report, however.)

The patient remained short of breath when she returned from x-ray and Bennett therapy was started. At 4:00 pm, she appeared very short of breath; her lips were cyanotic; her color was pale; and she was unable to eat supper. She continued coughing up blood in moderate amounts.

The ENT consultant saw the patient and applied topical anesthetic to both nares, examined the nasopharynx, and applied local cautery. At 5:30 pm, she appeared to be in labor, having contractions every 2 1/2 minutes, lasting for 15 seconds. Her blood pressure was 130/80. Her pulse was 100, respirations 36. At 5:45 pm, the patient called, saying that "she couldn't breathe." A physician was called; she was transferred to the labor area by wheelchair. Oxygen was started. Digoxin .5 mg IM was order at 7:30 pm, lasix 40 mg IM at 7:35 pm. Portable chest x-ray was ordered, Code 300. However, the patient expired at 7:50 pm. An emergency section was performed, with delivery of a stillborn infant.

The repeat chest x-ray showed cardiomegaly with findings compatible with congestive heart failure; segmental infiltrate and pulmonary infarction should be considered in view of the findings of the upper lung fields. A request for autopsy was denied by the family.

Final diagnosis: Acute congestive heart failure.
Acute asthmatic bronchitis.
Uterine pregnancy, delivered emergency postmortem Cesarean section, intrauterine death.

Comment

The Maternal Mortality Committee considered this death an obstetrical preventable one. Although the clinical picture is not clear, the situation would appear to be that of a typical mitral stenosis. There was cardiac enlargement; and this together with the other clinical signs, would suggest severe cardiovascular disease. It was felt that more intensive care and early diagnosis might well have prevented this maternal death.



ANSWERS TO YOUR QUESTIONS ABOUT BLUE SHIELD

Q. What is the new Blue Shield Reciprocity System?

A. *Reciprocity is a nationwide Blue Shield Claims processing system developed by all 72 Blue Shield Plans to be implemented March 1, 1972. Kentucky Physicians bill and receive direct payment for covered services from Kentucky Blue Shield, regardless of which of the other 71 Blue Shield Plans the eligible patient is actually a member.*

Q. What advantage is the new Reciprocity System to Kentucky Physicians?

A. *Kentucky Physicians rendering services to out-of-state members enrolled in Reciprocity groups will be able to bill Kentucky Blue Shield direct on our own familiar Physicians Service Report. Also, Kentucky Physicians will be paid direct by Kentucky Blue Shield and the program will be administered using the Usual, Customary, and Reasonable Guidelines approved by the Kentucky Medical Association.*

Q. Will all Blue Shield members be enrolled in Reciprocity groups?

A. *Not initially. Only certain groups with Usual, Customary, and Reasonable Blue Shield will currently be eligible for participation.*

Q. Will the Reciprocity System affect Kentucky Physicians payment for services rendered to Kentucky Blue Shield members?

A. *No. The only time Reciprocity will be in effect is when a physician renders a covered service to an eligible out-of-state member.*

Q. How will the physician know if the out-of-state Blue Shield member is eligible for Reciprocity benefits?

A. *All "reciprocity eligible" Blue Shield members will be issued identification cards bearing a red double-pointed arrow in the upper left corner indicating reciprocity.*

Q. Are there any special procedures to follow when billing a Reciprocity claim?

A. *Only one. Inside the red double-pointed arrow on the eligible members identification card will be an alphabetical letter followed by three numerals. (The number inside the arrow varies by Blue Shield Plan.) When filing a Reciprocity claim, the letter and numerals must be placed immediately preceding the members certificate number on the Physicians Service Report. This will be Blue Shield's only indication that Reciprocity is involved in this claim.*

Q. What services are covered for a member of a Reciprocity group?

A. *Covered services for out-of-state Reciprocity members include: surgery, anesthesia, radiation therapy, diagnostic x-ray, lab and pathology, in-hospital medical care, and out-patient emergency services. It is important to note that maternity services are not covered under the Reciprocity system. All maternity claims at present should be sent to the member's home Blue Shield Plan.*

Q. How can the physician get more information regarding the new Reciprocity System?

A. *Prior to March 1, 1972, a special detailed mailing on the new Reciprocity System will be sent to all Kentucky Physicians. In the meantime, if you have any questions, please contact the Professional Relations Division, Kentucky Blue Shield, 3101 Bardstown Road, Louisville, Kentucky 40205.*

Continuing Educational Opportunities

From The

KMA Postgraduate Medical Education Office

IN KENTUCKY

FEBRUARY

16 Postgraduate course, "Osteoporosis," by James W. Harkess, M.D., 6:30 pm, Jewish Hospital, Louisville

22 Postgraduate course, "Current Concepts in Practical Neonatology," by Jerry Seligman, M.D., Assistant Professor, Department of Pediatrics, Neonatology, University of Louisville School of Medicine, 7:00 to 9:00 pm, Children's Hospital Amphitheater, Louisville

MARCH

15 Postgraduate course, "Hyperlipidemia," by Maurice M. Best, M.D., and S. Philip Greiver, M.D., 6:30 pm, Jewish Hospital, Louisville

22-23 Eighteenth Annual Symposium on Cardiovascular Diseases, Stouffer's Louisville Inn, Louisville

28 Postgraduate course, "Up-to-Date Management of Left to Right Shunts in Congenital Heart Disease," by Kareem B. Minhas, M.D., Professor of Cardiology, Department of Pediatrics, University of Louisville School of Medicine, 7:00 to 9:00 pm, Children's Hospital Amphitheater, Louisville

APRIL

6 Seventeenth Annual Clinical Conference, "Hypertension," Lexington Clinic, 1221 South Broadway, Lexington

16-22 Postgraduate program, "Annual Family Medicine Review," University of Kentucky. For further information write: Frank R. Lemon, M.D., Associate Dean for Continuing Education, University of Kentucky College of Medicine, Lexington, Kentucky 40506

19 Postgraduate course, "Contraceptive Problems," by Marvin Yussman, M.D., 6:30 pm, Jewish Hospital, Louisville

25 Postgraduate course, "Development of Disabilities in Children," by Bernard Weisskopf, M.D., Associate Professor, Department of Pediatrics, Mental Retardation, and the Handicapped Child, Child Evaluation Center, 7:00 to 9:00 pm, Children's Hospital Amphitheater, Louisville

27 Eighth Annual Rheumatic Disease Symposium, University of Louisville School of Medicine and Kentucky Chapter of the Arthritis Foundation, Amphitheater of Health Sciences Medical Center, Louisville

IN SURROUNDING STATES

FEBRUARY

14-16 American College of Surgeons sectional meeting, St. Louis, Missouri

23 Postgraduate course, "Learning Disabilities and the Physician," Cleveland Clinic Educational Foundation, Cleveland, Ohio

MARCH

1-5 Twenty-First Annual Scientific Session, American College of Cardiology, Chicago, Illinois

7-11 Chicago Medical Society Midwest Clinical Conference and the Illinois State Medical Society Annual Meeting, Chicago, Illinois

13-15 American College of Surgeons sectional meeting, Philadelphia

13-16 Postgraduate course, "Maxillofacial Trauma," Department of Otolaryngology and Maxillofacial Surgery, University of Cincinnati Medical Center, Cincinnati, Ohio. For further information write: Miss Debby Adkins, Office of CONMED, Room 114, College of Medicine, University of Cincinnati, Cincinnati, Ohio 45219

SEND IN MEETING INFORMATION

Many medical organizations are setting dates for their spring and summer meetings. At the same time they are choosing the topics to be discussed, arranging for speakers and planning programs.

The Continuing Medical Education office of the Kentucky Medical Association would like to urge these societies and organizations to notify this office of these dates and topics so they can be added to the "Continuing Education Opportunities" calendar in *The Journal*. In this way conflicts in dates can be avoided and a wider audience can be informed of these upcoming meetings.

Please send such information, when available, to the KMA Continuing Medical Education Office, 3532 Ephraim McDowell Drive, Louisville, Ky. 40205.

PLAN TO ATTEND

Eighteenth Annual Symposium on Cardiovascular Diseases

March 22 and 23, 1972

STOUFFER'S LOUISVILLE INN — LOUISVILLE, KENTUCKY

Wednesday, March 22, 1972
9:00 a.m.

"A Practical Therapeutic Approach to the Hypertensive Patient"
FRANK A. FINNERTY, M.D., Clinical Professor of Medicine and Obstetrics and Gynecology—Director, Georgetown Cardiovascular Research, D.C. General Hospital, Washington, D.C.

"Congestive Heart Failure "
DEAN T. MASON, M.D., Professor of Physiology and Chief, Cardiovascular Medicine, University of California, Davis, California.

"Problems in Therapeutic Management—The Resistant Patient—The Azotemic Patient—and the Patient with Acute Hypertensive Crisis"
FRANK A. FINNERTY, M.D.

"Coronary Arteriography—Selection of Patients and Findings"
JAMES J. MORRIS, JR., M. D., Director of Myocardial Infarction Research Unit, Duke University Medical Center, Durham, North Carolina

THE BERNARD D. ROSENBLUM MEMORIAL LECTURE
"Digitalis Intoxication"
DEAN T. MASON, M.D.

"The Physiology of Myocardial Infarction"
JAMES J. MORRIS, JR., M.D.

"Acute Pericarditis in Clinical Medicine"
DAVID H. SPODICK, M.D., Director of Cardiology Division, Tufts University School of Medicine, Lemuel Shattuck Memorial Hospital, Boston, Massachusetts

PANEL DISCUSSION
J. HERMAN MAHAFFEY, M.D., Moderator

Thursday, March 23, 1972
8:30 - 9:30 a.m.

"GRAND ROUNDS"
University of Louisville Health Sciences Center Auditorium
"Pericardial Problems"
DAVID H. SPODICK, M.D., Conducting

10:00 a.m. — Stouffer's Louisville Inn

"Surgical Management of Hypertension and its Complications"
GEORGE C. MORRIS, JR., M.D., Professor of Surgery, Baylor College of Medicine, Texas Medical Center, Houston, Texas

"Exercise and Cardiac Arrhythmias"
PAUL L. MCHENRY, M.D., Associate Professor of Medicine, Division of Cardiology, Indiana University School of Medicine, Indianapolis, Indiana

"Surgical Treatment for Coronary Heart Disease"
GEORGE C. MORRIS, JR., M.D.

"Exercise Testing in Coronary Heart Disease"
PAUL L. MCHENRY, M.D.

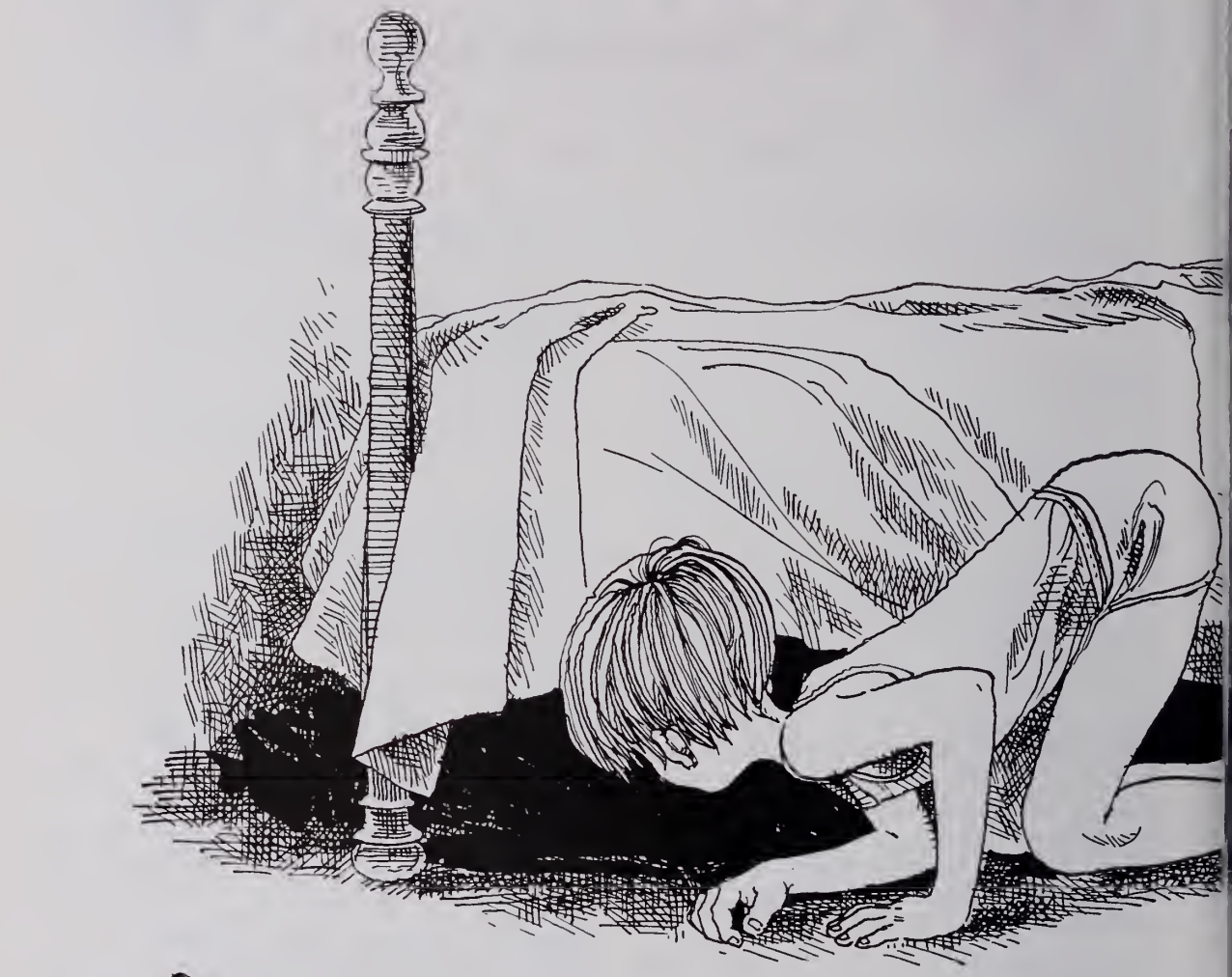
PANEL DISCUSSION
THOMAS V. INGLESBY, M.D., Moderator

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THE JEFFERSON COUNTY, KENTUCKY ACADEMY OF FAMILY PHYSICIANS
THE COUNCIL ON CLINICAL CARDIOLOGY, AMERICAN HEART ASSOCIATION

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with just one non-staining dose of Antiminth (pyrantel pamoate) Oral Suspension.

Highly effective. Active against pinworm...and roundworm.

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Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia

Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lbs. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml., supplied in 60 cc. bottles.

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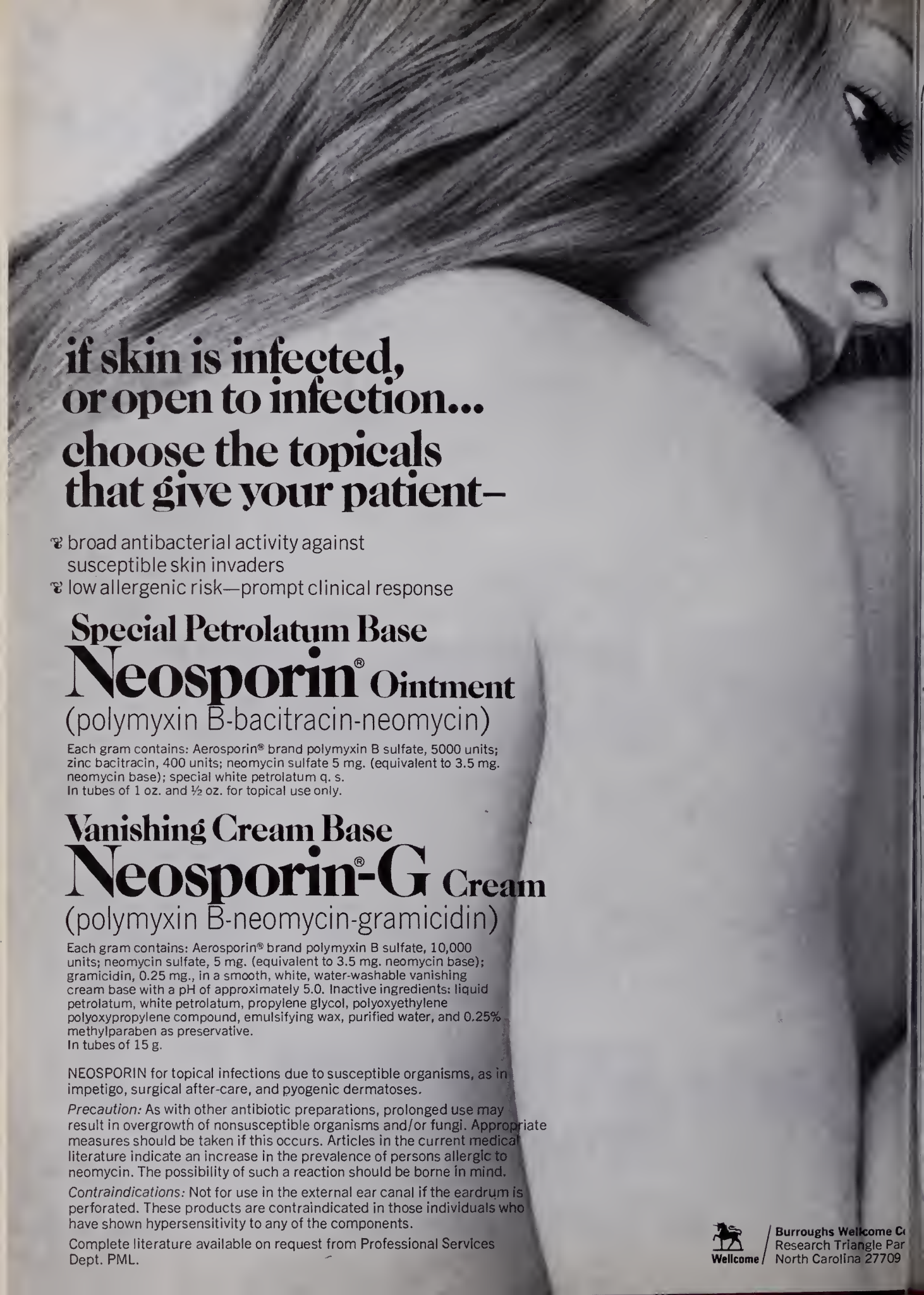
(pyrantel pamoate)

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In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

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Caution: Federal law prohibits dispensing without prescription.

Indications

Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (i.e. several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.

Contraindications

Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.

Warnings

When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexigenic effect, discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with the high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage In Pregnancy The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage In Children Not recommended for use in children under 12 years of age.

Precautions

In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorectic agent and a restrictive dietary regimen.

Adverse Reactions

Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration

The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

Overdosage

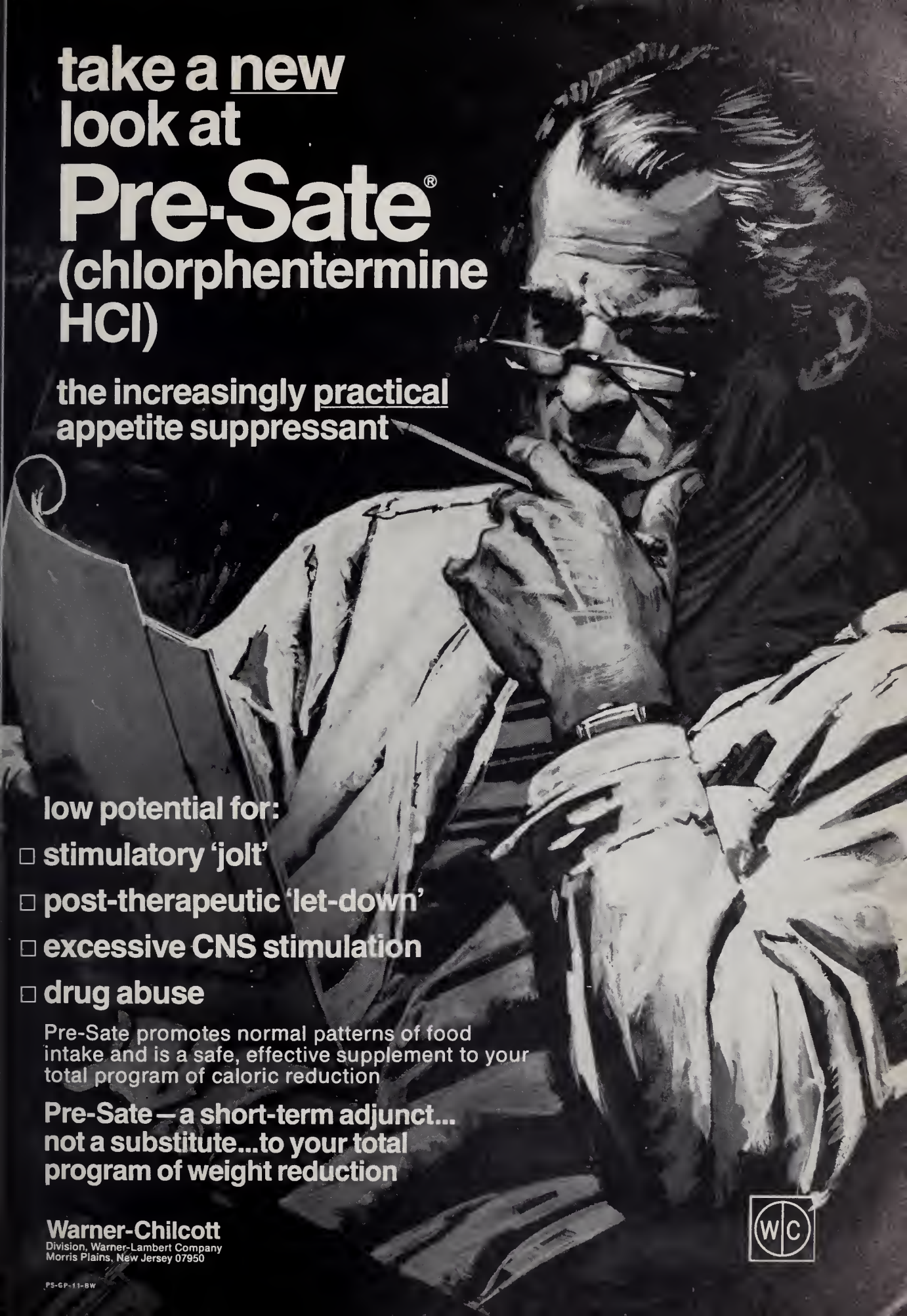
Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

How Supplied

Each Pre-Sate (chlorphentermine hydrochloride) tablet contains the equivalent of 65 mg chlorphentermine base; bottles of 100 and 1000 tablets.

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When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections. In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomycin hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in no less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

fections caused by susceptible strains
pneumococci, streptococci, and
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sistant strains. Staphylococcal strains
sistant to Lincocin (lincomycin
drochloride, Upjohn) have been
covered. Before initiating therapy,
lture and susceptibility studies should
performed. Lincocin has proved
luable in treating patients hyper-
nsitive to penicillin or cephalosporins,
nce Lincocin does not share
tigenicity with these compounds.
owever, hypersensitivity reactions
ve been reported, some of these in
tients known to be sensitive to
nicillin.

ell tolerated at infusion site: Lincocin
travenous infusions have not
oduced local irritation or phlebitis,
ien given as recommended. Lincocin
usually well tolerated in patients who
e hypersensitive to other drugs.
evertheless, Lincocin should be used
utiously in patients with asthma or
gnificant allergies.

patients with impaired renal function,
e recommended dose of Lincocin
ould be reduced to 25–30% of
e dose for patients with normal
dney function. Its safety in
egnant patients and in infants
s than one month of age has
t been established.

ncocin may be used with other
timicrobial agents: Since Lincocin
table over a wide pH range, it is
table for incorporation in
ravenous infusions; it also may be
administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



972 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatme
Skin and mucous membranes—Skin rash urticaria, vaginitis, and rare instances of foliative and vesiculobullous dermatitis h been reported. *Liver*—Although no direct lationship to liver dysfunction is establish jaundice and abnormal liver function te (particularly serum transaminase) have b observed in a few instances. *Cardiovascu*—Instances of hypotension following par teral administration have been report particularly after too rapid IV administ tion. Rare instances of cardiopulmonary rest have been reported after too rapid administration. If 4.0 grams or more adm istered IV, dilute in 500 ml of fluid administer no faster than 100 ml per hc *Special senses*—Tinnitus and vertigo h been reported occasionally. *Local reacti*—Excellent local tolerance demonstrated intramuscularly administered Linco (lincomycin hydrochloride). Reports of p following injection have been infrequ Intravenous administration of Lincocin 250 to 500 ml of 5% glucose in disti water or normal saline has produced local irritation or phlebitis.

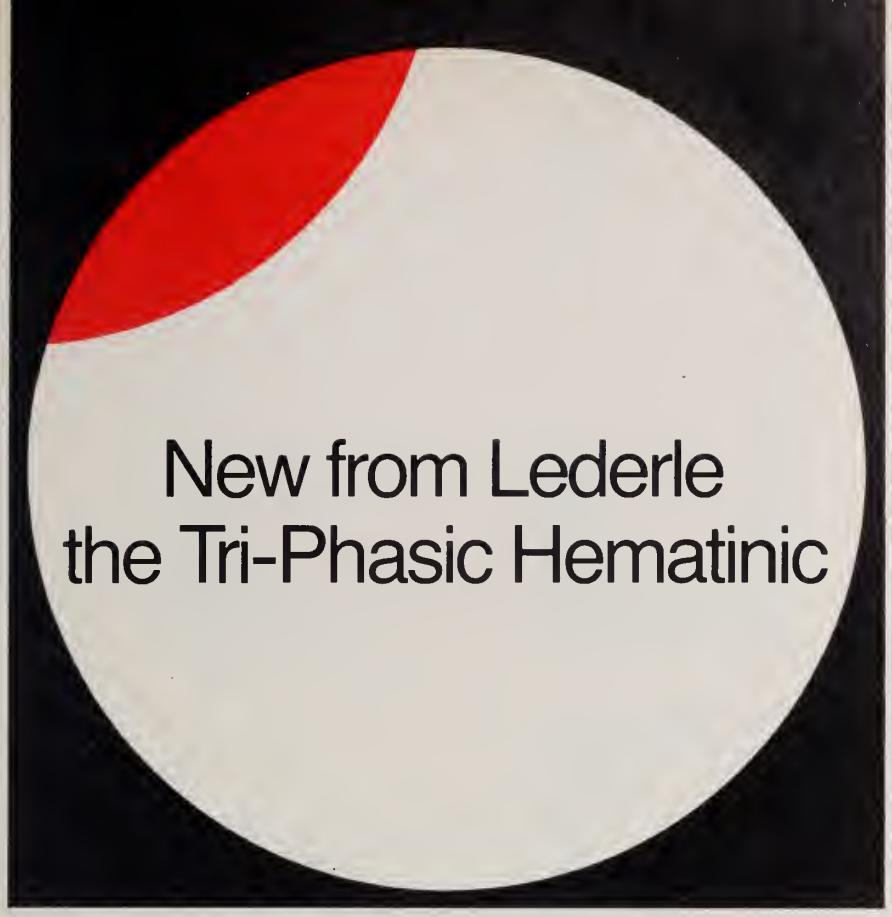
HOW SUPPLIED: *250 mg* and *500* Capsules—bottles of 24 and 100. *Ste Solution, 300 mg per ml*—2 and 10 ml v and 2 ml syringe. *Syrup, 250 mg per 5* —60 ml and pint bottles.

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Elemental Iron (as present in 350 mg. of Ferrous Fumarate)	115 mg.
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Precautions: Some patients affected with pernicious anemia may not respond to orally administered Vitamin B_{12} with intrinsic factor concentrate and there is no known way to predict which patients will respond or which patients may cease to respond. Periodic examinations and laboratory studies of pernicious anemia patients are essential and recommended. If any symptoms of intolerance occur, discontinue drug temporarily or permanently. Folic acid, especially in doses above 1 mg. daily, may obscure pernicious anemia, in that hematologic remission may occur while neurological manifestations remain progressive.

Adverse Reactions: G.I.: nausea, vomiting, diarrhea, abdominal pain. Skin rashes may occur. Such reactions may necessitate temporary or permanent changes in dosage or usage. Allergic sensitization has been reported following both oral and parenteral administration of folic acid.

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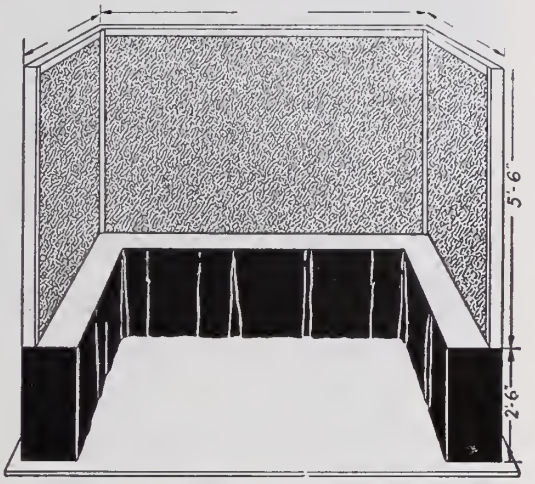
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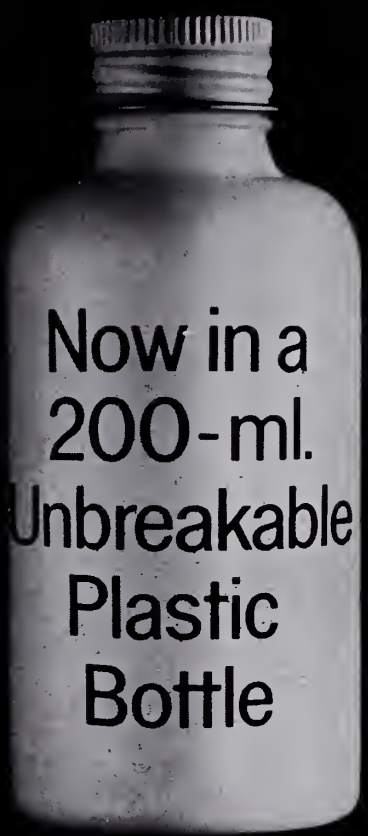
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The JOURNAL of the
Kentucky Medical Association

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VOLUME 70 FEBRUARY 1972 No. 2

Mallory-Weiss Syndrome and Massive Hematemesis Case Reports

Romeo S. Berardi, M.D.*
Lexington, Kentucky

Presentations of two cases of Mallory-Weiss syndrome are discussed. The importance of considering this syndrome among the other more common causes of upper gastrointestinal bleeding is emphasized.

IT is customary to associate massive upper gastrointestinal bleeding with peptic ulcerations, esophagogastric varices, gastritis, and to a lesser extent, gastric carcinoma, the more common causes of this challenging entity. Massive hematemesis can be the presenting sign of any of the above and, therefore, all must be considered in the differential diagnosis. The Mallory-Weiss syndrome (esophagogastric tears) is seldom given a prominent place in this differential diagnosis, although its characteristic clinical sign is hematemesis.

The purpose of this paper is to present two cases (seen in private practice) of the Mallory-Weiss syndrome with massive hematemesis, both necessitating operative intervention, and to suggest that this syndrome be included in the category of the more common causes of massive upper gastrointestinal hemorrhage.

Formerly Chief of Surgery, McDowell Appalachian Regional Hospital; presently Assistant Chief of Surgery, VA Hospital, and Assistant Professor of Surgery, University of Kentucky, Lexington, Kentucky 40507

Case Reports

Case 1: A 65-year-old white male was admitted to the hospital on 3-14-64 with the chief complaint of abdominal and mid-back pain. The patient was in relatively good health until he experienced the sudden onset of pain in the upper epigastrium approximately 12 hours prior to admission.

The pain was described as being moderate in intensity but continuous in nature, and radiating straight through the mid-back region. He obtained no relief after taking self-prescribed aspirin, bufferin, and an antacid. At approximately nine hours prior to admission, the patient had two episodes of vomiting, consisting of clear gastric content. His local physician was notified and admission to the hospital was advised. Upon arriving at the Emergency Room, he vomited about 250cc of bright red blood.

Past history revealed long standing bronchial asthma for which the patient was taking, for the past five years, Prednisone, 5mgm qid. An allergy to house dust was elicited. He periodically took a tablet of nitroglycerin for precordial chest pain which he had intermittently experienced since sustaining a myocardial infarction in 1949. A cholecystectomy had been performed in 1954. No history of any type of alcoholic intake could be elicited.

Physical examination revealed a 65-year-old white male in acute distress complaining of pain in the upper abdomen. Blood pressure

was 120/70mm Hg; pulse rate 84 per minute; temperature 98 degrees F. Pertinent findings on examination revealed some splinting of the right hemithorax. Lungs were clear to percussion and auscultation. A grade one systolic apical murmur was heard. A well-healed right subcostal surgical incision was present. No masses or tenderness were elicited in the abdomen. Bowel sounds were recorded as being absent. No costovertebral angle tenderness was present. Rectal examination was within normal limits.

Laboratory data revealed an admitting hemoglobin and hematocrit of 13.7gm and 47 vols percent respectively. Urinalysis was normal. The white count and differential was 12,100 with 69 neutrophils, 21 bands, 6 lymphocytes, and 4 monocytes. Serum electrolytes were within normal limits. BUN was 13 mgm%; prothrombin time was 80% of normal; BSP revealed a 15% retention of dye in 45 minutes. An ECG and x-ray of the chest were read as being essentially normal. X-rays of the abdomen revealed no abnormal gas pattern, free air, or calcifications.

Hospital course: A nasogastric tube was inserted and immediately returned about 500cc of bright red blood. The patient continued to bleed for the next four hours, during which time six units of blood were transfused. He was taken to the operating room; whereupon exploratory laparotomy revealed, via a gastroduodenotomy incision, brisk bleeding coming from the proximal stomach. In order to visualize this area better, the abdominal incision was extended over the anterior left hemithorax. An upper gastrotomy incision then revealed blood flowing from the lower esophagus. Exploration of this area unveiled a mucosal tear of the postero-lateral wall of the esophagus beginning at the cardia and extending upwardly for a distance of 6 cms. Arterial bleeding was issuing from the tear which was then oversewn with catgut beginning inferiorly and continuing superiorly. By placing gently downward traction on the suture, the entire length of the tear could be visualized and oversewn.

The postoperative course was eventful in that an infection of the wound developed. This was managed by incision and drainage, after which the patient made a complete recovery. He was weaned off his steroid and placed on one of the conventional bronchodilators with excellent control of his asthma.

Case 2: A 68-year-old white male was admitted to the hospital on 10-27-64 with the chief complaints of epigastric pain and vomiting. The patient was in reasonably good health until he experienced the sudden onset of pain in the upper epigastrium described as being moderate in intensity and radiating directly to the mid-back region. Pain was associated with nausea and then vomiting. He stated that he had two episodes of vomiting prior to admission and both consisted of undigested food. When seen in the Emergency Room he vomited for the third time, but this consisted of approximately 500cc of bright red blood.

Past history revealed the patient to have had numerous hospitalizations. In 1956, he was treated medically for an active duodenal ulcer. In 1957, an emergency "blind subtotal gastrectomy was performed for massive upper gastrointestinal hemorrhage." The cause of bleeding was never definitely demonstrated. He re-bled in the postoperative period requiring four units of blood. In July, 1964, a cholecystectomy and common duct exploration with removal of one common duct stone was performed. The patient had a long history of arthritis for which he was taking at least four Darvon, 65mgm cpd capsules daily for the last eight years. No history of alcoholic intake could be elicited.

Physical examination revealed a 68-year-old white male in acute distress complaining of pain in the upper abdomen. Blood pressure was 100/80mm Hg, pulse rate 100 per minute, respirations 20 per minute, and temperature 98.6 degrees F. He was pale and quite apprehensive. Lungs were clear to auscultation and percussion. Heart sounds were normal with a rate of 100. Surgical scars present over the upper abdomen gave it a road map appearance. No abdominal masses or tenderness could be elicited. Bowel sounds were normo-active. Rectal examination was normal.

Laboratory data revealed a hemoglobin and hematocrit of 7.0gm and 22 vols% respectively. CBC and differential were normal, as was a urinalysis. BUN, 25mgm%; SGOT, 15 units; prothrombin time, 100% of normal; total bilirubin was normal. An ECG and x-ray of the chest were within normal limits.

Upon admission, a nasogastric tube was inserted and bright red blood obtained. The patient received seven units of blood over the next 24-hour period. Because of continued bleeding, he was taken to the operating room on 10-28-64 for an exploratory laparotomy. The stomach remnant was buried in a mass of fibrous tissue making its liberation quite difficult. A gastrotomy incision was made and the clotted blood present evacuated. Brisk bleeding was noted coming from two tears at the esophagogastric junction. One extended along the lesser curvature side of the stomach for a distance of 6 cms and the other along the greater curvature side for a distance of 4 cms. Both were oversewn, and bleeding was controlled, He made a complete recovery.

However, two months later he returned again with massive hematemesis and melena. He required 9 units of blood to restore a normal hemoglobin and hematocrit level over a period of three days. No surgical intervention was undertaken and no definite source of bleeding was established. He was followed for four years thereafter, without any further evidence of gastrointestinal bleeding, and has been able to tolerate his "arthritic" pains more, requiring only an occasional enteric coated aspirin.

Discussion

When Mallory and Weiss[1] first described their syndrome in 1929, they emphasized the point that severe, occasionally fatal, gastric hemorrhage with hematemesis may occur after periodic alcoholic debauches as a result of acute emetogenic lacerations at the cardiac opening of the stomach. They reemphasized this belief in a further report in 1932.[2] However, from 1932 to 1952, an apparent lull in reporting this syndrome transpired. It was Palmer's report[3] in 1952 which refocused our attention to the importance of this syndrome as a cause of upper gastrointestinal hemorrhage. Whiting and Barron's report[4] in 1955 and that of Hardy[5] in 1956 seem to have given impetus and stimulation toward a more careful search for esophagogastric tears as a cause of massive hematemesis, for many case reports[6, 7, 8, 9, 10, 11] followed, permitting authors to summarize these cases in collective reviews.[12, 13, 14] The outstanding feature of most cases is the magnitude of hematemesis which so characterizes the Mallory-Weiss syndrome; the two cases presented are no exception.

Nevertheless, the precise incidence of the Mallory-Weiss syndrome is yet unknown.[15] It is clear, however, that the majority of cases which were at one time discovered at autopsy are declining and more are being diagnosed and treated surgically. The earlier and more liberal deployment of esophagogastroscopy,[16] improved techniques in barium studies[17] and arteriography[18] in the acutely bleeding patient should continue to increase the accuracy and frequency of preoperative diagnosis. Probably the most important consideration is the awareness and acceptance that the Mallory-Weiss syndrome does account for a real and significant percentage of cases of upper gastrointestinal bleeding.

In reviewing various reports,[3, 12, 13, 14, 17, 25] a median incidence of 7.8% can be established for the Mallory-Weiss syndrome as a cause of upper gastrointestinal bleeding. When one compares this percentage of proven cases of Mallory-Weiss syndrome with that (commonly estimated to be 10%) of the more loosely applied term of gastritis, then it becomes apparent that the Mallory-Weiss syndrome should assume a significant place in the commonly accepted causes of upper gastrointestinal bleeding. The number of missed cases otherwise classified as "bleeding of undetermined etiology" in medically treated patients or treated surgically by a "blind" distal gastrectomy, as exemplified by Case 2, remains conjectural. Endoscopists,[3, 16, 19, 25] however, support the contention that the syndrome is more common than generally thought, and the report by Shuttleworth and Hutt[20] emphasizes the point that some "blind" distal gastrectomies performed for upper gastrointestinal bleeding of undetermined etiology might very well have included the Mallory-Weiss syndrome, even though postoperative bleeding may not have occurred.

A preoperative diagnosis not only has great advantages technically, but as Holmes[13] pointed out, also practically. Of 62 patients treated medically, 34 or 54.8% died, and the correct diagnosis was made in 28 at autospy. Four deaths occurred in 28 patients in whom the correct diagnosis was established prior to death. In 64 patients operated upon, 12 or

19.2% died. In five out of the 12, diagnosis was missed at operation.

Furthermore, since approximately 20% of esophagogastric tears are multiple,[14] the surgeon is alerted to carefully scrutinize the entire esophagogastric region for more than one tear, for not to do so may lead to re-operation for continued bleeding.[21] Although it is quite reasonable, from a clinical point of view, to consider Boerhaave's syndrome[22] (spontaneous rupture of the esophagus) and the Mallory-Weiss syndrome as separate entities, it should be remembered that both can coexist in the same patient.[23]

The two cases presented illustrate that hematemesis does not have to be painless in the Mallory-Weiss syndrome;[24] that alcoholism, although quite common in this entity, need not be present; that vomiting bloodless material followed by hematemesis is an important diagnostic sign; that aspirin and steroids may predispose the mucosa of the esophagogastric junction to easier emetogenic tearing; that diagnostic measures and operative criteria used for other common causes of massive gastrointestinal bleeding should apply equally to the Mallory-Weiss syndrome;[25] and that the Mallory-Weiss syndrome should be considered as a significant cause of upper gastrointestinal bleeding.

Conclusion

Two cases of the Mallory-Weiss syndrome with massive hematemesis necessitating operative intervention for control of bleeding have been presented. This syndrome is being diagnosed more frequently, lending support to the contention that it is more common than one is led to believe by the number of cases reported. A plea is made to include the Mallory-Weiss syndrome in the differential diagnosis of all cases of upper gastrointestinal bleeding.

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The Current Status of Measles (Rubeola) in the United States †

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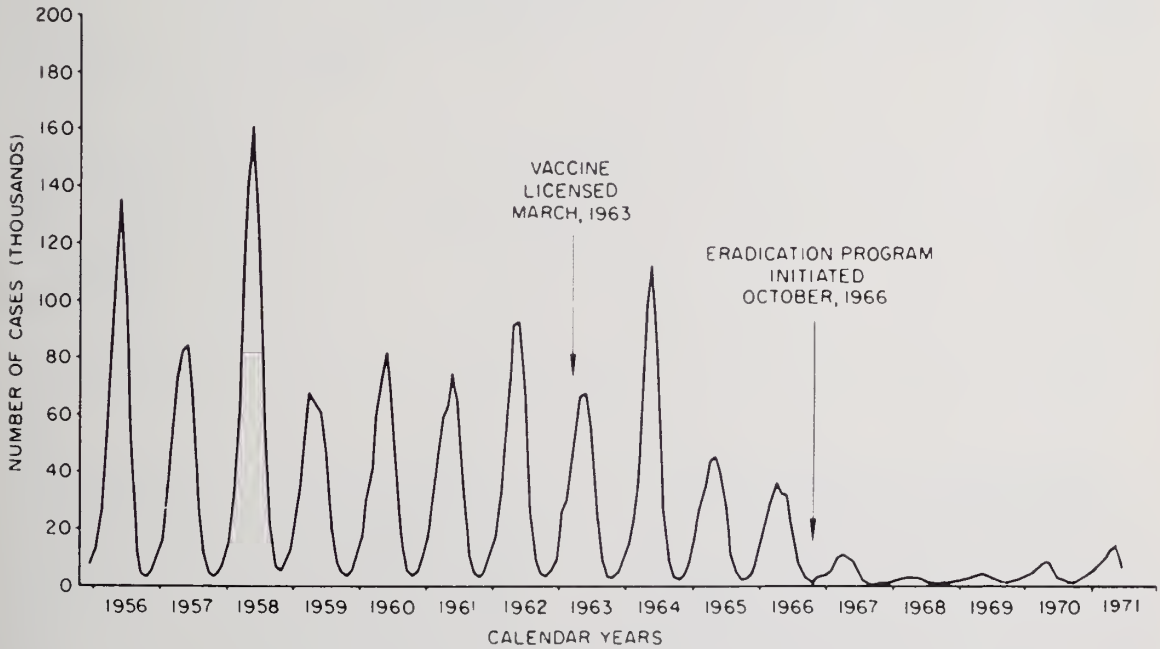
Following measles vaccine licensure in 1963, measles incidence fell dramatically. Since 1968, however, measles has been resurgent, with the overwhelming majority of patients being unvaccinated children. The principal cause has been decline in vaccine use.

LIVE attenuated measles virus vaccine was licensed for general use in the United States in March, 1963. This provided the opportunity to control a serious disease of childhood—a disease complicated by encephalitis in one of every 1,000 cases and death in approximately one of every 10,000 cases.

Following licensure, the annual reported incidence of measles fell from approximately 500,000 cases in the pre-vaccine era to 22,231 cases in 1968, a decrease of roughly 95% (Figure 1). At the same time, the number of reported deaths and complications due to measles also markedly decreased (Figure 2). Between 1959 and 1962, approximately 400 deaths a year due to measles were reported to the Center for Disease Control; in 1968, only 24 were reported.

Figure 1

REPORTED CASES OF MEASLES BY FOUR-WEEK PERIODS, UNITED STATES, 1956 - JULY 17, 1971



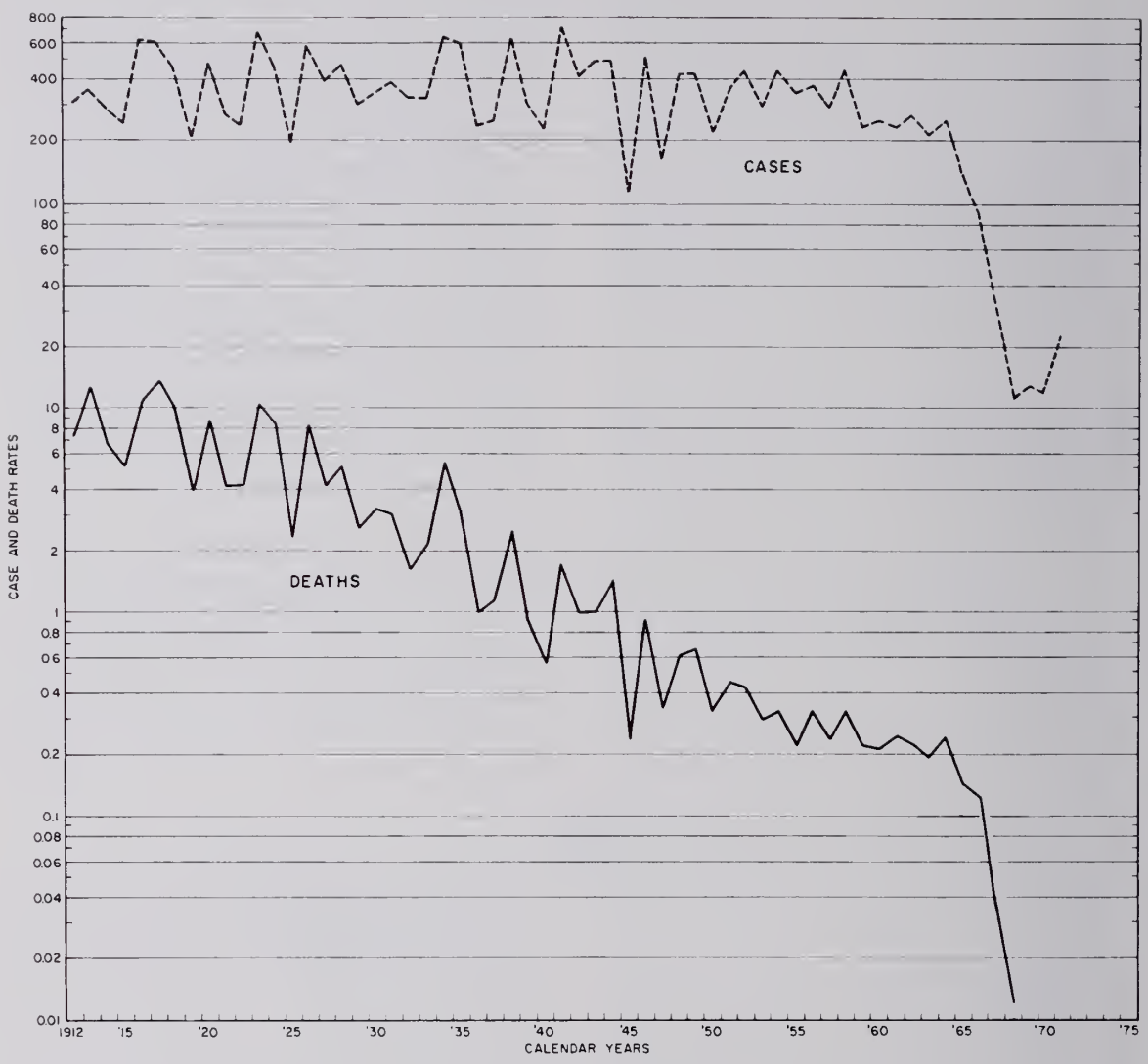
Although the mass measles eradication program initiated by the Public Health Service in October, 1966, did not accomplish its goal to eradicate measles in 1967, the downward trend in measles incidence indicated that measles was under control and that eradication was likely within the next few years.

†*Presented at the morning general session of the 1971 KMA Annual Meeting, September 22, Louisville*

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Figure 2

REPORTED MEASLES CASES AND DEATHS
PER 100,000 POPULATION
UNITED STATES, 1912-1970



Measles Trends in the United States

However, the trend toward measles eradication reversed itself after 1968 (Figure 3). In each of the last three years, the number of reported cases of measles has been higher than each preceding year (1969—25,826; 1970—47,351; 1971 (through September 11)—69,552). Furthermore, it is projected that 80,000 cases will be reported in 1971, the largest number of reported cases of measles since 1966.

During the current epidemiologic year EY 1970-71, the continuing resurgent pattern of measles was clear as early as October and November. During this time, case reporting was consistently higher than for the same period in 1969-70. Case incidence then increased sharply in February, 1971, and peaked the last week in April, when over 4,000 cases were reported. Then there was a rapid fall off in case reporting, consistent with the typical summer-autumn pattern for measles.

All nine regions in the United States have reported increases in measles cases. In some regions, these were modest; in others, measles has been resurgent. For example, in the East

South Central region (Kentucky, Tennessee, Alabama, Mississippi), over six times as many cases have been reported for the first eight months of 1971 than for the first eight months of 1970. Only 12 states and Washington, D.C., have had fewer cases of measles in EY 1970-71 than in EY 1969-70: Massachusetts, Maryland, New Jersey, Pennsylvania, Illinois, North Dakota, Nebraska, Delaware, Virginia, Arizona, Nevada, Alaska, and Washington, D.C.

Measles Trends in Kentucky

The pattern of measles in Kentucky is typical of the resurgence of measles in the nation as a whole. In the pre-vaccine era, approximately 10,000 cases a year were reported to the Kentucky State Department of Health. In 1964, almost 19,000 cases were notified. With widespread distribution of measles vaccine, measles incidence fell sharply, and the possibility of eradication in Kentucky seemed real. In 1967, 1,437 cases were reported; in 1968, 104; and in 1969, only 74, a 99% decrease since 1964. However, the trend in Kentucky reversed in 1970, with more than 1,000 reported cases. This upward trend has continued into 1971; through September 11, 3,899 cases have been reported, over five times as many as for the comparable period in 1970. Comparing incidence of the first 48 weeks of EY 1970-71 and 1969-70, Kentucky's increase in the number of measles cases is larger than any other state's.

Current Epidemiology

Who has been contracting measles? Several detailed epidemiologic investigations this past year have provided excellent data about measles patients.[1] Cases have occurred about equally in males and females, and the overwhelming majority of cases have been in children under 15 years of age. In urban out-

Figure 3 REPORTED CASES OF MEASLES BY 4-WEEK PERIOD, USA, EPIDEMIOLOGIC YEAR 1970–1971 COMPARED WITH 1966-67, 1967-68, 1968-1969, AND 1969-1970

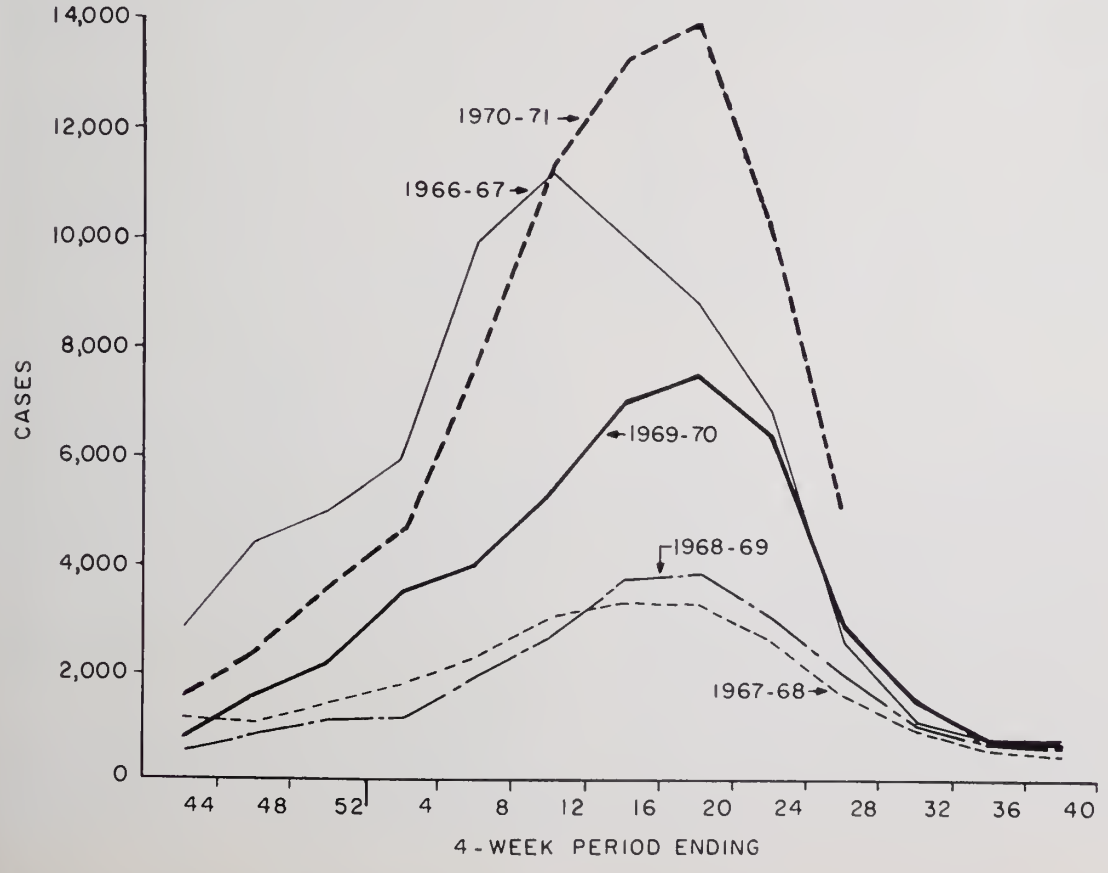


TABLE I

Measles Attack Rates by Vaccination Status and Measles Vaccine Efficacy in Ten Measles Outbreaks 1969-71

Location	Total No. of Cases	Attack Rate for Unvacc. (%)	Attack Rate for Vacc. (%)	Vaccine Efficacy (%)
Aberdeen, S. Dak.	286	77.0	6.9	91.0
Bowie Co., Texas	606	10.5	0.4	96.2
Bremen, Indiana	20	43.9	3.6	92.1
Governor's Island, N.Y.	73	33.5	2.4	92.8
Greenwood, Illinois	44	45.0	3.6	92.0
Jefferson Co., Ala.	37	27.8	4.2	84.8
Neshoba Co., Miss.	43	68.8	2.6	96.2
Northeastern Ohio	17	52.4	5.4	90.0
Scott City, Kansas	35	26.7	2.6	90.2
Waterbury, Conn.	106	60.5	2.0	97.4
	1,267			

breaks, the median age of patients has repeatedly been below five years, whereas in suburban and rural outbreaks, the median age has been six years or older. Presumably, crowded urban conditions permit more contact among preschoolers, and thus a much higher infection rate in this age group compared with less crowded rural populations.

Racial data from some metropolitan areas reporting measles outbreaks in 1971 suggests that a disproportionately large number of cases are in blacks. In measles outbreaks in Dallas, Houston, Little Rock, and Los Angeles, the attack rates for blacks were three to 55 times higher than for whites. Furthermore, demographic analysis of reported cases suggests that in many areas lower socioeconomic segments of the population were primarily involved.

Vaccine Efficacy

Trying to explain the increase in measles in the last two years, many physicians, health officials, and concerned parents have questioned the ability of vaccine to confer long-lasting protection against measles. Indeed, local and state health departments, as well as the national Center for Disease Control (CDC) in Atlanta, have become increasingly aware of measles occurring in previously vaccinated children, and several reports of such cases have now been published.[2, 3, 4] Uniformly, as shown in Table I, detailed epidemiologic investigations of these outbreaks have revealed a high rate of protection for previous vaccinees; clinical attack rates for unvaccinated children have exceeded the attack rates for previously vaccinated children by 10- to 30-fold. In nine of ten outbreaks investigated by CDC during 1969-71, live measles vaccine efficacy was demonstrated to be 90% or greater, and thus no basis for fearing vaccine failure was found.[1] In all of these and other investigations, vaccine failures could be attributed to one of several factors:

1. Receipt of killed measles vaccine. It has been well documented that protection after vaccination with killed virus is not durable, and immunity may last only a few years.[5] Recognizing this lack of adequate protection, health officials several years ago recommended that use of killed measles vaccine be discontinued.

2. Administration of live measles vaccine (Edmonston B strain) with immune globulin to infants less than one year of age.[6] Acknowledging the low rate of sero-conversion when vaccine was given under these circumstances, the U. S. Public Health Service Advisory Committee on Immunization Practices (ACIP) in 1965 changed the recommended age for measles vaccination from 9-12 months to at least 12 months of age.[7]

3. Inadequate storage and handling of vaccine.[4] Live measles vaccine virus is labile and may become inactivated by prolonged exposure to light and heat.

4. Failure to conduct thorough epidemiologic investigations and determine attack rates for unvaccinated as well as vaccinated persons. This requires conducting measles immunity

surveys to determine populations at risk to adequately evaluate outbreaks involving previously vaccinated persons.[2]

5. The 3-5% failure to sero-convert that may occur following inoculation with live measles vaccine.[8] For reasons which are not clearly understood, a small percentage of those given vaccine will not develop protective antibodies and thus will remain susceptible to measles.

Thus, failure of vaccine to protect has not been responsible for the resurgence of measles. On the contrary, measles vaccines are excellent immunizing agents and confer durable immunity against measles when used according to current ACIP recommendations. These vaccines induce antibody in over 95% of susceptible recipients[8] and have been shown to be over 90% effective in protecting recipients from clinical illness during epidemics.[1] Furthermore, serologic follow-up of vaccinees has shown that vaccine-induced antibody has persisted for ten years studied to date, with only a slight fall off in geometric mean antibody titer, suggesting long-lasting protection.[6]

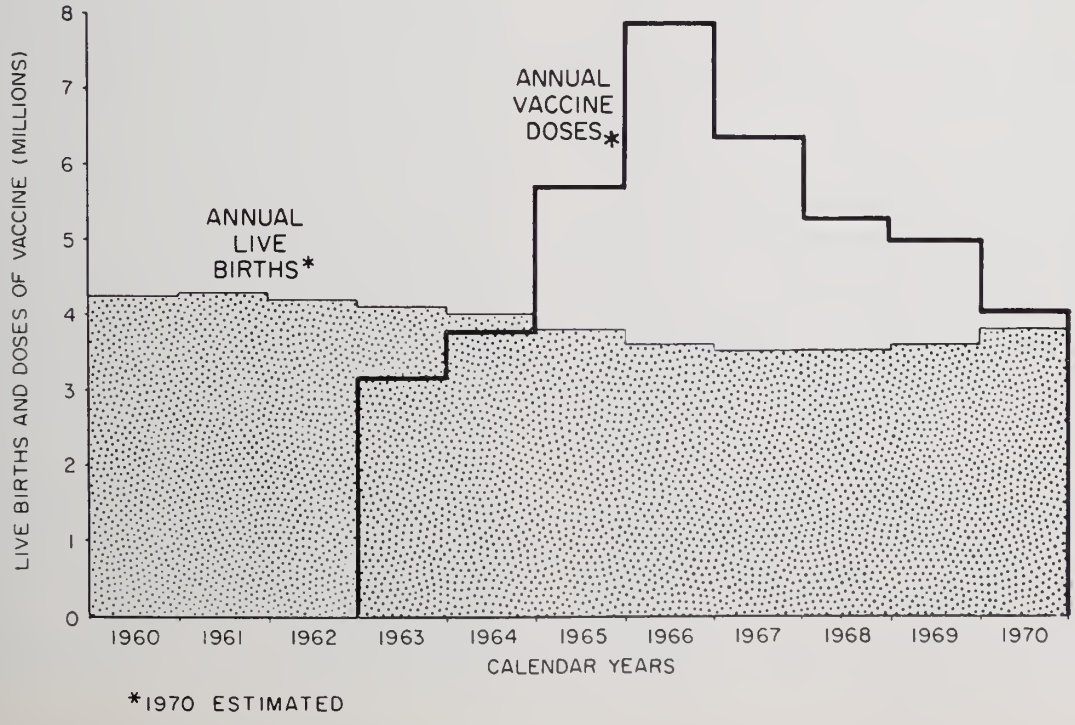
Vaccine Distribution and Use

The problem, therefore, has not been with vaccine effectiveness, but rather with vaccine utilization. As William Schaffner, M.D., stated at CDC's Eighth Annual Immunization Conference, "Measles vaccine is no damn good in the vial."[9] Figure 4 shows that the distribution of measles vaccines in the United States began declining in 1967, and that total vaccine purchases in 1970 were 42% lower than in 1966. Additionally, the number of doses distributed nationally in 1970 was only slightly larger than the number of persons entering the pool of susceptibles.

This decline in vaccine use has been overwhelmingly responsible for the upsurge in measles incidence today. This is further illustrated by data from the 1970 United States Immunization Survey.[10] In 1970, 57.2% of all children age 1-4 had received measles vaccine, a

Figure 4

LIVE BIRTHS IN THE UNITED STATES BY YEAR, 1960-1970, AND DISTRIBUTION OF LIVE MEASLES VIRUS VACCINE FOR DOMESTIC AND MILITARY USE BY YEAR, 1963-1970



decrease of 4.2% since 1969. By September 1970, levels were even lower within urban poverty areas (population Σ 250,000); in these areas, only 41.1% of children age 1-4 had been vaccinated, 5% less than in 1969. Overall, this 1970 survey determined that only 62.3% of all children age 1-4 years were immune to measles by vaccination or prior infection. Since vaccine distribution during the last year could only account for the new susceptibles entering the population, it is clear that a large susceptible herd remains unprotected against measles.

Factors Responsible for Resurgence of Measles

Thus, the marked increase in measles cases since 1968 is directly attributable to decreasing distribution of vaccine. This has led to a large susceptible population, and, in turn, has permitted measles to propagate freely among unprotected children, especially in hard-to-reach urban and rural poverty areas.

What are the factors responsible for this situation? First, and foremost, the lack of long-term backing of immunization programs. The drying up of federal funds for measles vaccine purchase in 1969 dealt a severe blow to financially troubled state and local health departments. The result was a marked decrease in vaccine purchase and, concomitantly, a large decrease in measles vaccine use. Moreover, the switching of federal support from one disease to another has militated against sound maintenance immunization programs. Indeed, the shift of federal funds into rubella programs in 1969 and the associated glamour of a new "target" disease pulled much support and interest away from measles eradication efforts. Second, the lack of resources on the local and state level to support adequate immunization practice. Third, the complacency of some physicians and other health officials over the deteriorating status of the immunizable diseases. And fourth, public apathy, especially in "hard-core" poverty areas. All four of these factors must be dealt with for adequate control programs to be established.

In 1966, the Public Health Service specified four essential conditions for measles eradication: 1) routine immunization of infants, 2) immunization of all susceptible children on entering school or other places of congregation, 3) surveillance, and 4) epidemic control.[11] With effective use of measles vaccines according to the above guidelines, the eradication of measles by the end of 1967 was predicted. But this goal was not reached. And it was not because health officials were naive in thinking these four prerequisites for eradication would work. The theory was sound; only the commitment was lacking. These four conditions remain valid prerequisites for measles control. Whether the upward trend of measles can be reversed again and adequate control established is now dependent on increased funding on national and state levels, on intensive, innovative, and aggressive approaches at reaching the unvaccinated, and on better understanding of the concept of maintenance immunization. Maybe then we can chisel a new date on measles' tombstone.

Closing Summary

Live attenuated measles vaccine was licensed in the United States in 1963. Between 1963 and 1968, the annual reported incidence of measles fell from approximately 500,000 to 22,231. Since 1968, however, measles has been resurgent. During the first 8½ months of 1971, more than 69,000 cases were reported nationally. Kentucky reported over 3,000 more cases in that period than in the first 8½ months of 1970. The great majority of patients were unvaccinated children under 15 years of age. The median age of patients in urban outbreaks was 5 years or younger compared with at least 6 years in suburban and rural outbreaks.

Although measles has occurred in some previously vaccinated children, these cases represent only a small part of the overall problem. Several epidemic investigations have refuted claims of vaccine failure and documented vaccine efficacy of 90% or greater. The principal cause for the resurgence of measles has been

decline in vaccine use. The 1970 United States Immunization Survey showed that only 57.2% of all children age 1-4 years had been vaccinated, 4.2% fewer than in 1969. A concerted effort by physicians and health officials—national, state, and local—backed by federal and state funding will be necessary to reverse the trend.

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Community Psychiatry: Scott County Evaluation

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The authors studied the community psychiatry program in Scott County. Most patients improved and were satisfied with their treatment. The results suggest important ways in which mental health staff and community physicians can improve outcome.

KENTUCKY is a leader among the states in providing psychiatric services through community mental health centers. Centers operate in virtually every section of the state. This has come about largely because of strong leadership at the state level.

This paper presents results from a program in Scott County and discusses some ways in which local physicians can better understand some of the problems and promises of such programs and make better use of them.

The rationale for community psychiatry programs rests on three interrelated, firm principles, all strongly supported by research findings. First, services close to home increase program utilization.[1, 2] One study found that travel distances beyond 50-60 miles significantly reduced utilization.[3] We think that miles per se are less important than convenience, which includes distance, adequacy of transportation, and such factors as availability of care for children left at home. Second, early treatment reduces the severity of illness and social disruption which the illness causes, and also correlates with greater improvement from treatment.[4] Third, such programs can significantly reduce hospital admission rates.[5]

Few evaluation studies of community psychiatry programs exist. This is especially true of rural community mental health programs. The one study of a "rural" community psychiatry program which we found in a review of the literature was in a county of 85,000 which included a city of 35,000 and a rapidly growing branch of the University of California. The problem is an important one in Kentucky, a state in which 93 of 120 counties have populations under 25,000.

Setting

This program was conducted in Scott County, which is situated in the Blue Grass region of Kentucky, about 15 miles north of Lexington. It has a population of 18,000 within an area of 285 square miles, about 10,000 of whom live in the county seat, Georgetown. Two other incorporated cities have populations of about 500. Although agriculture is the major industry, several factories employ up to 350 people each, and many people commute to Lexington, most often for industrial jobs. Georgetown College, a Baptist liberal arts school of 1,200 students, is the second largest employer in the county. Per capita income in 1968 was $2,303. Psychiatric services on a somewhat less active basis than at the time of this study existed from mid-1967.

Program

We were present once weekly from one to nine pm at the county health department building in Georgetown. Treatment was aimed toward dealing with acute symptoms and role dysfunction, with the hope of quickly restoring the patient to his more usual, successfully adaptive level of functioning. Accordingly we evaluated patients promptly. Direct services were supplemented by consultation and educational services primarily with school personnel, physicians, public health nurses, and court officials. Making such services the extension or sequel of direct treatment greatly increased their acceptance.

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The Study

Follow-up evaluations by personal interview, telephone, or mailed questionnaire were begun in February, 1970, and completed in May. We were able to obtain follow-up data on 93% of the 118 patients seen during the year 1969. Patients generally reacted with pleasure and gratitude that we had cared enough to determine how they were doing. Several patients who had terminated treatment welcomed the follow-up call as an opportunity to make another appointment. Thirty-seven patients were still in treatment at the time of follow-up. Forty had dropped out and forty-one had completed treatment. Except for letters scheduling make-up appointments, we had not tried to get drop-out patients to return to treatment.

Results

Women constituted over 51% of the county population and 57% of the patients. Negroes constituted 16% of the patients, compared with 12% of the county population distribution. The ratio of patients living in Georgetown to those residing elsewhere was similar to the county population distribution. The data suggest that rural programs can representatively serve the full population of a catchment area. We consider this important. If, for example, we had only treated poverty-level patients, it is unlikely that we would have had such open lines of communication with diverse community groups; and our educational and consultative services with these groups would have been less effective.

Eastern State Hospital accounted for 41% of all referrals and local physicians for 31%. These data underscore the importance of close liaison with inpatient facilities and local physicians, who together accounted for over two-thirds of all referrals.

At follow-up, 80% reported their main problems improved and 90% were satisfied with their treatment. Comments of satisfied patients stressed the adaptive value of their treatment. "He was concerned about me as a person and helped me to see my problems weren't all so bad." "It helped me to realize more or less what has happened and to know I had to do something about it." "It just opened up new doors to me I never dreamed existed. My daughter hasn't really changed, but I now handle her so much better and am a better mother." A few patients reassured us that they had not forgotten us: "I'm feeling great. If I start slipping, I'll be sure to come in."

Dissatisfied patients' comments varied somewhat more, but a pattern emerged. They felt they had been rushed in treatment and had not been seen enough times. A middle-aged woman with a marital problem said, "I didn't feel I had enough time with you. It was all so rushed. I decided I'd just save the money and do it myself." A young woman with an obsessive character neurosis came for treatment because of post-partum depression. The acute problem was resolved and treatment terminated after three sessions. At follow-up she wished she had had more time to understand how her personality contributed to her constricted life pattern.

Although drop-outs were less improved at follow-up and were more often dissatisfied with their treatment, a majority reported themselves both improved and satisfied with treatment. The reason for dropping out was determined for 35 patients. Nine patients stopped because of dissatisfaction, but an equal number stopped because they felt better and did not believe they needed further treatment. Drop-outs were more likely to have lived outside the city of Georgetown and were less well educated. Relatively more were referred by physicians and were diagnosed as neurotic.

Discussion

Population and financial realities probably make part-time mental health programs in rural areas unavoidable, at least in terms of professional time. The findings in this study demonstrate that a part-time program can representatively and effectively serve the community. They underscore the importance of liaison, which can be difficult in a part-time program. This is especially true for physicians, one-half of whose referrals dropped out of treatment. We often had to evaluate patients before we conferred with the referring physician. Some physicians were unfamiliar with referral for psychiatric evaluation and inadequately prepared their patients. Several patients had not been told they would be seeing a psychiatrist or psychiatric social worker. We hope this study encourages both community physicians and

mental health center personnel to mutually improve their understanding of the others' function and the effectiveness of their communication.

Our location in the county health department building was an advantage. Patients came to a building, the location of which they knew, and which they identified as providing health care. We shared the good reputation of its personnel. The community knowledge of the county health officer and the public health nurses was available to us. The nurses were able to provide some supervised evaluation and care between weekly clinics. A full-time secretary was easily able to handle scheduling and take messages during the week, thus overcoming some of the disadvantages of part-time service.

We consider this report relevant to many of the rural counties of Kentucky. A study such as this can be of immediate value in altering services. This is certainly not the only pattern for rural community psychiatry programs, but it seemed an effective one, and the data support this. The data suggest important areas where in similar settings or similarly patterned programs, the staff and community physicians can improve referral, utilization, and outcome.

Summary

To study the effectiveness of a rural community psychiatry center, we interviewed patients who had been treated during the year. Follow-up data was obtained for 93% of all patients. A majority were both improved and satisfied with their treatment. Of the one-third of patients who dropped out of treatment, most were female, neurotic rather than psychotic, and had been referred by physicians, had less education, and lived outside the city in which services were provided. Drop-outs were less improved and more often dissatisfied with their treatment. The findings suggest important ways in which mental health staff and community physicians can improve outcome.

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Medical Progress

The Newer Antibiotics: Some Therapeutic Considerations

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Gentamicin

AMONG the newer broad spectrum antibiotics, gentamicin has proved to be of considerable value in treatment of infections caused by a wide variety of gram negative rods. It has shown *in vitro* and *in vivo* effectiveness against *Pseudomonas aeruginosa, Klebsiella pneumoniae, Enterobacter aerogenes,* indole positive and indole negative species of *Proteus, Serratia marcescens,* and *Staphylococcus aureus.*[1] Two of the more important indications for use of gentamicin are 1) in the patient known to have serious *Pseudomonas* sepsis and 2) as initial therapy pending culture results in the individual suspected of having acute sepsis caused by a gram negative rod.[2] The need for initial therapy with an antibiotic active against *Pseudomonas* is especially great in patients of the latter category who have become septic secondary to burns, leukemia, or immuno-suppressive therapy since the chances of infection by *Pseudomonas* are great. However, a note of caution must be sounded against the empiric use of gentamicin to treat a serious pneumonia that is *presumed* to be caused by gram negative organisms without performing a gram stain and culture of the sputum; a transtracheal aspirate should be obtained from those patients who cannot raise secretions. For if the pneumonia should actually be caused by *Pneumococci,* there is great danger of treatment failure because these organisms are quite resistant to gentamicin.[3] Examples of persistent pneumococcal pneumonia with repeatedly positive blood cultures for *Pneumococci* while patients were on full doses of gentamicin have already been reported.[4]

Gentamicin also may be unsuccessful in treating infections of the hepato-biliary tract. Bile levels of gentamicin are well below the serum level even in persons with normal hepatic function. In the presence of hepato-biliary dysfunction, bile levels are even lower. For example, Smithavas *et al*[5] detected less than 1 μg per ml in the bile of four patients with hepato-biliary disorders who were treated with 3-5 mg/kg/day of gentamicin. Since good penetration of an antibiotic into bile may be necessary to eradicate hepato-biliary infections, it may be well to consider other antibiotics as alternates or additives to gentamicin in such instances. Ampicillin, in high doses, may be quite suitable for three reasons: 1) It is active against many of the gram negative organisms that cause hepato-biliary tract infection, 2) It reaches high concentration in bile,[6] and 3) It may act synergistically or at least additively with gentamicin when the latter is used to treat patients in whom biliary tract function is not seriously impaired.[7]

As noted above, gentamicin does have demonstrable activity against *S. aureus* and it has been used successfully to treat moderately severe staphylococcal infections.[8] Nevertheless, it cannot be recommended as a first-line choice for anti-staphylococcal therapy at this time. A number of other antibiotics are available that are considerably less toxic and with which more extensive experience has been obtained. These include methicillin, oxacillin, cephalothin, and erythromycin.

As experience increases with gentamicin, it is becoming increasingly apparent that much is yet to be learned as to what constitutes an

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optimum therapeutic regimen. The standard dosage of 1.0-1.5 mg/kg/day is probably insufficient for patients with serious infections who have normal renal function. For example, Jackson and Riff[9] found that when this dosage was given, about one-third of their patients had concentrations in their serum that were less than the minimal level generally considered to be therapeutic—about 4 μg/ml.[10] Furthermore, they failed to cure the bacteremia of most patients in whom the serum gentamicin levels were 2 μg/ml or less. On the other hand, bacteremia was generally eliminated from patients who received sufficient antibiotic to achieve serum levels of 4 μg/ml. Thus, it is now recommended that adults with severe infections should be given initial therapy with gentamicin in dosages of 5-7 mg/kg/day followed by maintenance dosage of 3 mg/kg/day.

The presence of impaired renal function poses serious problems in gentamicin therapy because this antibiotic is excreted primarily by glomerular filtration.[11] There is danger, therefore, of accumulation with attendant risk of toxic damage to both cochlear and vestibular function of the eighth nerve. Gentamicin also can be nephrotoxic. Since the dosage must be modified in the presence of renal failure, a number of schemes have been proposed for estimating proper dosage. These usually are based on a calculation of the creatinine clearance or serum concentrations of creatinine and urea. A commonly used method suggests multiplication of the serum creatinine by a factor of four.[12] This calculation provides an approximation of the T 1/2 of gentamicin, that is, the time required for the serum concentration to fall by one half. Gentamicin is then given at intervals equivalent to *every other* T 1/2 at the standard 1.0-1.5 mg/kg/day dosage. For example, if the serum creatinine is 5 mgm%, then T 1/2 = 5 x 4 = 20 hours. The time between dosages is estimated by 2 x T 1/2 = 2 x 20 = 40 hours.

Unfortunately, actual measurement of gentamicin in the sera of patients with renal failure has shown that formulas such as the one cited are frequently of poor predictive value. In some patients, non-therapeutic levels may be present in serum while in others dangerously high levels may be achieved. Obviously, such factors as changing renal function and peritoneal or hemodialysis may affect these levels.[13] It is, therefore, extremely desirable to obtain *exact* levels if optimum therapeutic effect is to be obtained with minimal risk of toxicity. This is easily done by simple antibiotic diffusion techniques that can provide accurate answers within five to seven hours using very small amounts of blood.[14, 15] The importance of doing these simple assays cannot be overemphasized and it behooves us as clinicians to obtain the necessary administrative support for their performance wherever established hospital bacteriology laboratories exist. In areas without such facilities, regionalization of bacteriologic support should be considered in order to make information provided by newer techniques rapidly available to all those who require it in order to provide the best antibiotic therapy.

The question often arises as to the desirability of combining gentamicin and carbenicillin to treat serious *Pseudomonas* infections. Support for the use of combined therapy is derived from observations that these two antibiotics may be synergistic *in vitro* against *Pseudomonas*.[16] Furthermore, the chance of resistance developing to either of these antibiotics during therapy may be reduced. As yet, however, there has been no controlled study in humans to determine if *in vivo* synergism with carbenicillin and gentamicin actually occurs. Somewhat disturbing in this regard is a recent report that gentamicin activity can be destroyed when it is mixed with high concentrations of carbenicillin and allowed to stand for several hours in a iv bottle.[17] A flurry of controversy has erupted subsequent to this report that still has not been resolved completely. Certainly, it is clear that the two antibiotics should *never* be mixed in the same iv bottle. Rather, gentamicin should be given by the intramuscular route only and carbenicillin by intravenous administration. Preliminary evidence[18] suggests that when the antibiotics are given in this manner, *in vivo* inactivation of gentamicin does not occur in persons with normal renal function. It is still not known whether inactivation of gentamicin may occur within the body of persons who have extremely high serum levels of carbenicillin as the result of

unrestricted intravenous administration in the presence of renal failure.

Carbenicillin

Carbenicillin is the first semi-synthetic penicillin to have significant activity against *P. aeruginosa.* The anti-bacterial spectrum of carbenicillin is otherwise similar to ampicillin, although some indole positive *Proteus* species and *Enterobacter* strains are susceptible to carbenicillin but not to ampicillin.[19] There is little justification, however, for the use of carbenicillin in most infections not caused by *Pseudomonas.* Other effective antibiotics are available at far less cost to the patient.

Carbenicillin has been used enthusiastically for treatment of *Pseudomonas* septicemia in patients with cancer and the results generally have been good. Bodey *et al* have reported "effective" treatment of 54 of 59 *Pseudomonas* infections in cancer patients, many of whom were leukemic.[20] In addition, they have noted that the frequency of fatal infections caused by *Pseudomonas* in their institution has declined from 31% to 8% per year. These results stand in contrast to treatment successes of 55% and 24% when leukemic patients were treated with either gentamicin or colistin, respectively. In their experience, gentamicin and colistin have proved to be only minimally effective in patients with neutropenia. On the other hand, these workers claim that carbenicillin was effective despite the presence of neutropenia.[21] As might be expected, Bodey *et al* have noted an increased frequency of infections caused by gram negative organisms at their hospital.

Our own experience with carbenicillin in treating serious *Pseudomonas* infections has been much less successful.[22] Although most of 20 patients showed improvement during treatment with 24 gm/day of carbenicillin, only six were cured. Furthermore, two of 11 patients with *Pseudomonas* pneumonia were cured. Five of 17 patients with extra-urinary tract infection relapsed 12-23 days after initiation of therapy. In each case, relapse was caused by a strain of *Pseudomonas* that had become highly resistant to carbenicillin. The rapid development of resistance by *Pseudomonas* further emphasizes the need for very selective use of carbenicillin in order to delay emergence of resistant strains within the hospital environment. Already, carbenicillin resistant strains of *Pseudomonas* have displaced sensitive strains on some major burn units.[23]

Because extremely large doses of carbenicillin are required in order to be effective, there is potential danger of toxic accumulation in the serum of individuals whose capacity to excrete it via the kidney is impaired. The serum T 1/2 of carbenicillin is about one hour in normal individuals. In patients with severe renal failure, the T 1/2 is increased to about 15 1/2 hours.[24] When both renal and hepatic failure are present, the T 1/2 increases still more to about 23 hours. Thus, there is a small but significant role played by hepatic excretion of carbenicillin in the presence of renal failure. Currently recognized adverse reactions that appear to be related to high serum levels of carbenicillin include seizure activity, elevations of serum transaminase and purpura or bleeding from mucous membranes. The latter disorder tends to occur in individuals with extremely high serum levels of carbenicillin. Preliminary evidence suggests that bleeding is related to a disturbance of platelet aggregation mechanisms.[25]

As is the case with gentamicin, proper dosage of carbenicillin in the presence of renal failure is sometimes difficult to determine. This is especially true when hepatic dysfunction also is present or if the patient is undergoing intermittent hemodialysis. Hemodialysis by either the Kiil or coil-type artificial kidney will reduce serum levels of carbenicillin by approximately 60% during a six-hour run.[24] Suggested dosage modifications derived from our own experience with carbenicillin in hepatic and renal failure are listed in Table I.

TABLE I

Suggested Dosage of Carbenicillin for Extraurinary-Tract Infections by *P. aeruginosa*

Creatinine Clearance	Dosage
ml/min	
>30 ± hepatic dysfunction	4-5 g every 4 hr
10-30	2-4 g every 6-12 hr
<10	2 g every 12 hr
<10 + hepatic dysfunction	2 g every 24 hr
Hemodialysis	Additional 2 g after each dialysis

Newer Cephalosporin Derivatives

Cephaloglycin was the first oral cephalosporin to be marketed in this country and bears mentioning more for its historical interest than any other reason. It is sufficiently absorbed after oral administration (250 mg or 500 mg taken every six hours) to provide anti-bacterial activity in the urine but not in the serum.[26] Gram negative species that are usually susceptible to the concentrations of cephaloglycin obtainable in urine include *Escherichia coli,* indole negative strains of *Proteus* and *Klebsiella.* Strains of *Enterobacter,* indole positive *Proteus, Pseudomonas* and *Enterococci* are usually resistant.[27] Most strains of *S. aureus* are sensitive to cephaloglycin, but less so than to many other antibiotics that could be used to treat such infections.[28] Experience with cephaloglycin in the treatment of urinary tract infections has varied from the moderately successful in one series[29] (11 of 23 patients abacteriuric one month after discontinuing therapy) to rather poor results in another series wherein 12 of 16 patients relapsed within four weeks after cessation of therapy.[30]

Cephalexin, introduced in 1971, is much better absorbed than cephaloglycin and has a similar spectrum of activity.[31] Cephalexin is somewhat less active *in vitro* than cephaloglycin, but its better absorption provides sufficient serum activity to permit treatment of less serious soft tissue infections caused by penicillinase-producing *S. aureus.* Cephalexin is well excreted in the urine and can be used to treat urinary tract infections caused by gram negative organisms that are sensitive to its action. Group A *Streptococci* and *Pneumococci* are also inhibited by cephalexin. Cephalexin, however, should rarely be the antibiotic of choice for infection caused by these organisms since penicillin G is more effective, very much cheaper and time-tested. For a patient allergic to penicillin G, erythromycin will provide excellent alternative therapy. Clinical success in the treatment of urinary tract infections with cephalexin appears to be no greater than with a number of other antibiotics to which a given organism may be sensitive.[32] At present, there are two principal indications for its use. First, in urinary tract infections caused by organisms resistant to other more tried and less expensive antibiotics. And, second, as follow-up therapy for patients treated with a parenteral cephalosporin that was chosen either because the patient was allergic to other antibiotics or because of microbial resistance to other antibiotics.

Rifampin

Rifampin is a semi-synthetic derivative of rifamycin B that is well absorbed after oral administration. It has a broad range of microbicidal activity including such organisms as *Mycobacterium tuberculosis, Mycobacterium leprae, Neisseria meningitidus,* the trachoma agent[33] and vaccinia virus.[34] In the usual dosage of 600 mg once daily, blood levels peak at three hours after administration, and useful levels frequently are still present at 12 hours.[35] The prolonged serum levels are due in part to the high concentrations of rifampin excreted in bile with subsequent enterohepatic recirculation. Only 10-25% of a 600 mg dose is excreted in the urine within 24 hours.[36] This may partially explain the failure of rifampin to cure patients of bacteriuria.[37]

There is great excitement about rifampin in the treatment of drug-resistant *M. tuberculosis* infections.[38] Preliminary studies of rifampin in combination with other anti-tuberculosis drugs for *initial* treatment of pulmonary tuberculosis are now beginning to appear. A recent United States Public Health Service trial suggests that, for the first time, a two-drug oral regimen (rifampin-isoniazid) can eliminate tubercle bacilli from the sputum of 95% of patients with far advanced cavitary disease within 16 to 20 weeks.[39] Previously, such results could be obtained only by a triple-drug regimen. The treatment of leprosy by rifampin is also encouraging.[40] However, the extremely high cost of this antibiotic (about $500 for one year of therapy) clearly puts it beyond reach of nations that bear the burden of the world's 15 to 20 million known cases of leprosy.

Rifampin is effective in reducing the meningococcal carrier rate by approximately 90% in military and civilian populations as compared with control groups.[41] Thus, for the first time since the development of resistance to sulfonamides among strains of meningococci, an antibiotic has become available that reliably

eradicates the carrier state. Unfortunately, rifampin-resistant strains have emerged frequently during treatment of the nasal carrier state.[42] It can be predicted, therefore, that widespread resistance to this antibiotic by *N. meningitidus* will evolve unless its prophylactic use is restricted to the absolute minimum, i.e., high risk situations. Emergence of resistance to rifampin has also occurred during treatment of urinary tract infections.[37] Because resistance to rifampin may also arise during treatment of tuberculosis, it is recommended by some that rifampin should probably be given only to patients requiring re-treatment or in initial treatment where drug hypersensitivity exists to currently effective drugs. The use of rifampin alone is not recommended.

Caution in the use of rifampin is mandatory because it has a significant toxic potential. Toxic manifestations consist primarily of liver dysfunction with elevation of serum bilirubin and serum transaminase, transient leucopenia and diarrhea. Very serious side effects have been reported when high dose twice-weekly rifampin is given in combination with other anti-tuberculosis agents. In a study reported by Poole *et al*[43] eight of 16 patients so treated developed pyrexia. Of these, three developed thrombocytopenia that led to mucosal bleeding in one instance. The association of these toxic reactions with the presence of circulating antibodies to rifampin was highly significant.

In summary, we clinicians can well be thankful for the important additions to our therapeutic armamentarium represented by some of the antibiotics discussed here. As with other antibiotics, their value to us is directly proportional to the knowledge we have of their pharmacology and their anti-bacterial spectrum.

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SPECIAL ARTICLES

Attitudes Toward Employment for Mothers And Day-Care for Children in Appalachia

HENRY C. YANG*

In Appalachia, better medical care is contingent on the solution of more general problems. A study was undertaken to determine the attitude toward employment for mothers and day-care for children.

IN the last few years, the concepts of employment for mothers and day-care for children have come into prominence in the headlines. Whether these ideas are good or whether they will help solve some of the problems in "deprived areas" of America, including Appalachia, is the subject of much controversy. An equally important question and the subject of this article is how the people who would be directly affected by these plans feel about them; their cooperation and participation are of obvious import if these two ideas are to be effected. The purpose of this article is to present the findings in a small, rural farming county in Kentucky which might be representative of many parts of Appalachia.

Menifee County is located 60 miles east of Lexington, Kentucky, and has approximately 5,000 people, 400 of whom reside in the county seat of Frenchburg. The "cash crop" is still tobacco, although an increasing number of residents commute to factories in adjacent counties to the East.

Methods

As time was a limiting factor, it was not possible to interview all the parents of preschool age children. A decision was made to contact the parents of the babies born in 1968.

Seventy-seven babies, including one set of twins, were on the 1968 birth record files of the Menifee County Health Department. Of the 76 sets of parents, four were residents of adjacent counties and hence deleted from the survey. Twenty-seven sets of parents were screened out because either the father, mother, or both had at least a high school education. It was felt that the children of these people are not the primary target group of a day-care center, as their home environment is less likely to be disadvantaged. Older mothers would probably have an especially difficult time adjusting to work away from home. The age of 40 was arbitrarily defined as a cutoff, and one set of parents (mother—age 43) was deleted from the survey for this reason. Thus, 44 sets of parents remained in the original survey group. Of these, three had moved outside of the county and one was deleted because the 1968 baby had died and the family no longer had any children under the age of six. This left 40 families in the survey group.

The age and education of the mother and the total number of living children in the family were available from the birth record files. The objectives of the interview were to obtain the following information.

1. Is the family obtaining some form of assistance from the government?
2. Has the mother ever worked? Where? When? Why did she stop? Is she presently working?
3. Is she physically able to work?
4. How willing is the mother to work?
5. What is the parents' attitude toward a day-care center?
6. How many of the children are under six years of age?

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When the author visited each household, he indicated that he was interested in discussing the feelings of those interviewed about the ideas of a day-care center and of employment for the mothers who no longer would have to be home to care for the children. An attempt was made to explain what a day-care center is. The points made were that it would be a place for children from the ages of two to six (i.e. pre-school), where they would go in the morning and come back home in the late afternoon and where they would get proper care, supervision, and activities. The costs would be free or nominal. The parents were then asked how they felt about these two concepts. The remaining information was elicited later on in the interview. The interviewer talked to the mothers in about 75% of the cases, because they were more likely to be home; to both parents in about 15% of the cases; and to the fathers in about 10% of the cases. However, an effort was made to have the response as the consensus feeling of both father and mother.

The willingness to work and the attitude toward day-care were given ratings from plus three to minus three—the former being most favorable and the latter, the least. The ratings were based on the parent's comments and the interviewer's own judgment and were recorded immediately after the interview. After all the interviews were finished, an attempt was made to standardize the variations in rating from day to day. This was done with the aid of comments which had been recorded. The numerical ratings, along with some of the associated comments, are listed in the Tables.

Results

The average age of the mothers was 23.1. They had on the average 8.4 grades of schooling. The average family had 3.4 children, 1.7 of whom were under the age of six. All families denied receiving any welfare assistance from the government, although five families indicated they were getting food stamps. All but two of the mothers were physically capable of working.

Of the six items elicited in the interview, two—the willingness to work and the attitude toward day-care—were quantitated from a rating of minus three to plus three. Table I shows the ratings and some of the associated comments.

TABLE I

Willingness To Work

+3 Presently working; definite plans to work.
+2 Would like to work, but has no immediate plans to do so; working, but plans to quit.
+1 Good idea; would work if she had to.
0 Neutral.
−1 Prefers staying home with the children.
−2 Too much housework; too many children; role of mother is at home.
−3 Unalterably opposed to mother working; husband won't permit wife to work.

Attitude Toward Day-Care

+3 Very enthusiastic about idea; it would be good for the children; she would definitely send her children to such a center, even if she did not work; she needs someone to care for the children right now.
+2 Excellent idea, but not as strong a response as above.
+1 Good idea, but would probably still keep children with mothers or in-laws; good idea, but feels no need of it for herself, since she's home; good idea, but not sure whether she'd send her own children to such a center.
0 Not sure about the idea; expressed some doubt about safety of the children; would depend if the child liked the center or not; alright if neighbors wanted it, but not particularly interested in it herself.
−1 Children are young only once; can hardly leave her children.
−2 Opposed to idea, but not vehemently so.
−3 Definitely against idea; wants children to stay home.

The average rating for willingness to work was +.60 and that for the attitude toward the day-care was +.58. There appears to be a correlation between the two responses, $r=.865$ ($p < .01$).

TABLE II

	Willingness To Work Rating						
	+3	+2	+1	0	−1	−2	−3
Number of cases	11	7	6	1	3	7	5
	Attitude Toward Day-Care Rating						
	+3	+2	+1	0	−1	−2	−3
Number of cases	6	8	10	5	4	4	3

Four mothers indicated that they were presently working. Seventeen had never worked. Nineteen had worked sometime in the past, but were not working when the survey was taken. Of the latter group, four did not cite any particular reason for stopping. The remaining 15 gave the reasons listed in Table III.

TABLE III

Reason	Number of Times Cited
Children	7
Marriage	2
No baby sitter	2
Work took too much time	1
Work got on her nerves	2
Low pay	1
Laid off	2
Moved to another state	1
Organization no longer exists	1

The above included four people who gave dual reasons. Two people cited children and being laid off as their reasons. One cited the baby sitter problem and low pay as her reasons. Another stopped because of the baby sitter problem and too much time spent on work.

The mother's age appears to be related with her willingness to work and attitude toward day-care as is indicated by the ratings for the following age groups.

TABLE IV
Age (number of cases)

	Under 20 (7)	20-29 (20)	30 & over (12)
Willingness to work	+2.56	+ .6	— .5
Attitude toward day-care	+1.67	+ .6	+ .16

In fact, those who were working at the time of the survey (4) were relatively young, averaging 21 years in age. Those who had never worked (17) were relatively old, averaging 27.5 years in age.

Education also appears to be related to whether a mother works or not. Those who were working at the time of the survey averaged 10.25 grades. Those who had never worked averaged only 7.6 grades. The amount of education appears to be tied in with the willingness to work and the attitude toward day-care.

TABLE V
Grades of Education (number of cases)

	7 or less (6)	8-9 (2)	10 or more (12)
Willingness to work	— .5	+ .35	+1.67
Attitude toward day-care	— .5	+ .75	+ .92

There also appears to be some connection between past work experience and the willingness to work and the attitude toward day-care.

TABLE VI
Work Experience (number of cases)

	Never Worked (17)	Worked in past/not at time of survey (19)	Working at time of survey (4)
Willingness to work	— .41	+1.05	+3
Attitude toward day-care	— .29	+1.21	+1.25

There is apparently a relationship between the composition of the family and the willingness to work and attitude toward day-care.

TABLE VII
Total Number of Children (number of cases)

	2 or less (19)	3-4 (8)	5 or more (13)
Willingness to work	+1.21	+ .75	— .39
Attitude toward day-care	+ .84	+ .625	+ .15

No. of Children Under Age of 6 (number of cases)

	1 (16)	2 (19)	3 (5)
Willingness to work	+ .19	+ .63	+ 1.8
Attitude toward day-care	+ .19	+ .58	+ 1.8

Mothers with few total number of children and mothers with large numbers of children under six score high in the willingness to work and attitude toward day-care.

Discussion

The response to the two concepts was warm, although not overwhelming. The response would probably have been much stronger if it were not for two factors: 1) People with high educational levels were screened out of the survey. These are people who probably are most likely to approve strongly of both ideas. As stated previously, these people were deleted from the survey originally because they are more likely to be managing for themselves and their children successfully. 2) Only parents who had babies in 1968 were surveyed. Since these babies were only a half to a year and a half years old, these mothers were not likely to be working. (In fact, only four were.) Perhaps nonworking mothers would be less sympathetic to both ideas.

It is interesting to examine the reasons given by mothers who had worked, but who were not working at the time of the survey. A large proportion of the reasons is related to family life. Seven out of 15 people who gave reasons for stopping work included children as the reason or as one of two reasons.

The possibility of taking substantial numbers of families off welfare by effecting employment for mothers and day-care for preschoolers appears unlikely in this particular county. Whether this finding is applicable to other locations in Appalachia is highly questionable. Every family denied being on welfare. This is almost completely correct; consultation with the Department of Public Assistance indicated that

only one family in the survey group was receiving AFDC. Five families indicated that they were receiving food stamps. (The Department of Public Assistance indicated that seven were; but in all fairness, some families do not consider food stamps as government assistance). It should be noted that a larger number of the families in the survey group have received welfare or food stamps sometime in the past.

Which mothers are likely to be more willing to work and to be more favorable toward day-care for preschoolers? They tend to be young and more educated; they have some past work experiences, smaller families, and a large number of children under six. Looking at it another way, the less educated parents with large families will be most resistant to these two ideas. One might justifiably ask whether they aren't the ones who need the jobs the most and their children the ones who would benefit the most from day-care.

Although Menifee, like any other county, is unique, some of the findings in this study certainly might be applicable to all of Appalachia. Surely the question of employment for mothers in some areas is really quite academic, as there is no industry nearby presently or in the foreseeable future. (The residents of Menifee County are within 30-60 minutes commuting time to a substantial number of factories.)

Of course, many other issues would have to be considered before implementation of these ideas could even take place. They include human and physical resources, transportation, administration and financing of the day-care center, and the availability of jobs for mothers. They have not been included in this article, as these issues are very much local phenomena.

That the social, economic, and educational problems cannot be isolated from the medical ones becomes readily apparent to anyone spending some time in Appalachia. Hence the health worker must realize that some of the medical problems will never be solved unless the other problems are also remedied, and should be tuned in to these other areas. Possibilities for integrated solutions also exist. For example, day-care centers could serve as vehicles for delivering nutritional and medical care for preschoolers, in addition to their educational role.

EDITORIALS

Let's Consider the Gut

WE have a brand new national foundation. On June 15, 1970, the Digestive Disease Foundation opened its office in Bethesda, Maryland. The objectives are stated briefly: 1. Recruitment of physicians for training to improve care of patients afflicted with digestive diseases, 2. Education in digestive diseases for all physicians, 3. Research, 4. Education of health related professions, 5. Involvement of the lay public, and 6. Financial support, obtained by gifts from the public at large and by physician and lay membership on the following schedule—founder $100, sustaining $25, contributing $10, member $5, student member $2. Membership and contributions are tax deductible. The director is Donald W. Harris, Ph.D., 9650 Rockville Pike, Bethesda, Maryland, 20014.

The American Gastroenterological Association, founded in 1897—the oldest society of medical specialists in this country—, has been the chief sponsor of this foundation, but the other national organizations are equally responsible and interested in it: the American College of Gastroenterology, the American Society for the Study of Liver Disease, the American Society for Gastrointestinal Endoscopy, and other smaller groups. It is therefore a united effort of the more than two thousand physicians who devote their interests exclusively, or nearly so, to the study and treatment of digestive diseases.

The scope of study by this foundation includes peptic ulcer, malignant disease of the stomach, small bowel, colon, and rectum, ulcerative colitis, regional ileitis, and granulomatouns diseases of the entire gut, diarrhea in its numerous forms, malabsorption, sprue, hepatitis, cirrhosis, gallstones, pancreatic diseases both benign and malignant, carcinoid, and any number of diseases of lesser frequency. We cannot but admit that these diseases need study and research. Our knowledge of some of them is very scant indeed, and even the timeworn subjects of ulcer and gallstones need further exploration. Note the recent interest in the etiology, pathogenesis, and treatment of gallstones. One optimistic researcher actually predicts that within ten years preventive measures will greatly decrease the incidence of gallstones; and when they do appear, they may be absorbed or dissolved with medication. Well, 30 years ago few of us ever considered a trip to the moon!

"The harvest is great and the laborers are few." Diseases of the digestive tract are about third in respect to the cause of death in the United States, yet they cause the greatest number of complaints, the greatest number of hospital admissions, the largest number of days lost from work annually, and the most economic drain from disability of all system diseases. Thirty-one percent of all cancer deaths are due to cancer of the digestive organs. Cancer of the colon and rectum is the second most common cause of death from cancer in our population. Among 500,000 patients referred annually to several (7) major medical centers for diagnosis and treatment, 16 percent were for digestive disease complaints, the largest single category of disease—about three times as large as for cardiovascular disease and four times as large as for blood disorders. Yet, for the care of this disproportionately large number of patients, physicians well trained in their care are relatively few. Only 1,550 physicians in private practice in the U.S. concern themselves primarily with digestive disease—less than one for every 100,000 population—fewer by far than those in cardiology, blood diseases, and respiratory infections. Trainees in this specialty supported by the National Institutes of Health numbered 141 in 1966 compared with 1,146 in cardiovascular diseases. The average medical

school employs six full-time teachers in cardiovascular diseases, four in blood diseases, and three in digestive diseases. While accounting for one-sixth of the total disease experience of our population, the entire extramural research support by NIH is but five percent of their total budget. Research in hepatitis, cirrhosis of the liver, ulcerative colitis, malabsorption, and diseases of the pancreas is scant and poorly supported, though these illnesses comprise an increasing proportion of our concern as practicing physicians.

These are the principal reasons for bringing this new foundation into being, and they appear to me sound and sufficient. By so doing, it is hoped that a more equitable proportion of federally supplied money for research may be directed into this area. Far more important than that is the prospect that privately subscribed and philanthropic gifts may be made available for use. There are few medical schools or teaching hospitals which today offer adequate training programs, residencies, or fellowships in gastroenterology. These must be increased. More money alone will not within itself provide a remedy for all our ills or needs medically or otherwise, but is just a fact of life that adequate financing is a basic requisite for providing good medical training. And this is the logical point of departure. If good teaching programs are offered, young physicians will be attracted to this field. Gastroenterology is one of the very oldest of medical specialties, but we have fallen far behind; in fact, we are near the tail-end. We must hurry and catch up with the parade.

SAM A. OVERSTREET, M.D.

It Couldn't Happen Now!

THE medical world is having numerous observances of the fiftieth anniversary of the discovery of insulin by Banting and Best. We should all be thankful that this miracle took place in 1921, because it probably couldn't happen now.

In the first place, neither Banting nor Best would qualify as researchers by today's sophisticated standards. Banting was an inquisitive surgeon with considerable orthopedic training and a faltering practice. Best was a meticulous postgraduate student of physiology and biochemistry. Neither had training in genetics, electron microscopy, statistics, molecular chemistry, computer data processing, or office management with emphasis on personnel relations. In fact, neither had a long bibliography of useless publications.

Any request from Banting and Best for research funds would have been passed over, not only because of their lack of superficial qualifications, but because in this brave new world of huge funding, they would not appear to be men of great vision. Who but a Banting or Best would borrow someone else's laboratory for a period of eight weeks and start his research with only ten dogs? If they had submitted a 60-page grant request (in 20 copies) properly supported by bibliography, the resulting site inspection by their scientific peers would certainly have found that results from only ten dogs could not be "statistically significant," and besides, the ten dogs should have been selected at random and studied double blind as well. Anyway, no project of this scope could possibly be funded for less than $250,000 annually for at least ten years in order to determine the general direction of the project. It would then take a year or more to develop a suitable research team and obtain necessary equipment. The grant would, of course, include a 40-50 percent overhead figure which should adequately take care of any administrative needs including payroll deductions, Social Security, state and federal taxes deducted from the employees, Blue Cross, Blue Shield, retirement funds, and other modern appurtenances to the "good" way of life.

The project would have been considered by the Research Committee at one of their quarterly meetings and eventually by the Committee on Human Studies. Of course, there were no

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human studies early in the research, but that is irrelevant. The Committee would meet in order to discover this fact for itself. Anyway, although humans were *not* involved, *dogs were;* and certainly the anti-vivisectionists and humane leagues should look into the prevailing conditions. Assuming all of these obstacles were surmounted and the Toronto Fire Department and Building Commission had found the laboratory safe and fireproof, the air conditioning functioning well (for the comfort of the animals), and all details worked out, Banting and Best still couldn't begin their research. For one thing, there is the matter of proper representation of various minority groups. This would demand the hiring of more people to effect a satisfactory ethnic balance, to say nothing of Women's Lib, as well as the demands of union regulations, all of which would have swollen the research team to a group much larger than the original two.

Most obvious of all, however, is the fact that both Banting and Best showed a deplorable lack of public relations sense and medical gamesmanship in announcing their discovery. In the first place, *before* the results were final, there should have been fortuitous "leaks" to both *Time* magazine and the *Wall Street Journal. Life* would have covered their efforts with a four-page photographic spread entitled, "Life Goes to a Pancreatic-Duct Ligaturing." In a year or two, Best might have presented a paper at a medical meeting giving "preliminary, inconclusive results." These would be picked up by the extraneous quasi-medical periodicals. Some months later, the data would be presented to the appropriate national society, where it would be both endorsed and hotly disputed. Then a National Committee would be formed to consider the usefulness of insulin. Instead it would promulgate a final report entitled "Who Knows What Diabetes Is Anyway?" Banting would be interviewed by Hugh Heffner for *Playboy* magazine, where the host would equate lack of insulin with lack of sexual freedom, or vice versa.

Both men would have been the guests of David Susskind's and would have appeared on the *Today* show. The *Christian Science Monitor* would cautiously quote a quote from a foreign correspondent. An untrustworthy lab assistant would steal the laboratory notes for publication in the New York *Times;* and *Pravda,* as always, would denounce the whole affair as a capitalistic plot. By now a paperback edition of the "true inside story of insulin" would have reached the newsstands and Hollywood would pay $1,000,000 for the movie rights to "The Insulin Story." This would be made into a Hollywood opus with Raquel Welch taking the part of the diabetic dog and Richard Burton and George C. Scott cast as Banting and Best.

It is a pity that Banting and Best lacked the benefits of modern-day research and public relations techniques. However, it is just as well that the discovery of insulin happened as it did. With such primitive methods, so few experimental cases, such deplorable laboratory surroundings, and without the blessings of the computer and the biostatistician, insulin would never have made it through the Food and Drug Administration anyway.

So it's a good thing the discovery of insulin happened 50 years ago, because it couldn't possibly happen now.



John S. Chambers, M. D.

1889-1971

ON October 9, 1971, death claimed John S. (Brick) Chambers, M.D., retired Director of the University of Kentucky Health Service and a driving force behind the creation of the Albert B. Chandler Medical Center and its related colleges. In the brief span of his 82 years, Doctor Chambers managed to establish himself in the mainstream of American medical practice and biomedical research, as well as to become a leading figure in the affairs of the University of Kentucky and the Medical Center.

Born in Calloway County to William and Louisiana Chambers, John Chambers grew up in anticipation of a medical career. In 1907, he entered the Kentucky State College, forerunner of the University of Kentucky. After several economic setbacks, John Chambers graduated in 1913 and entered the University of Michigan School of Medicine, receiving his M.D. in 1921. While at the University of Michigan, he served as a research and teaching assistant in bacteriology and several related fields.

Following his marriage to Annabel Grainger and a brief period of private practice in Paducah, Doctor Chambers moved his new family to Lexington where he resumed private practice. One of the pioneers in research medicine, Doctor Chambers early established his own medical research facilities, among the first in central Kentucky.

Feeling the need to extend his contributions beyond private practice, he became a public health officer for Fayette County. In 1928, President Frank L. McVey appointed Doctor Chambers Director of the University of Kentucky Health Service and professor of public health. He held this post until his retirement in 1957. He was also emeritus clinical professor of medicine.

On the suggestion of Dr. McVey, Doctor Chambers undertook a study of medical practice and medical education in Kentucky. It was out of this effort and ensuing discussions with President McVey that the idea of a medical school in Lexington first took shape. During this period, the vigorous physician reached national

(Continued on next page)

(Continued from page 121)

stature as the author of "Medical Service in Kentucky," published in 1931, and "The Conquest of Cholera," published in 1938.

Unfortunately, the realization of Doctor Chambers' dream of a great medical school at U of K was delayed several decades. Two world wars and a major depression, as well as waning interest in the Commonwealth, discouraged all attempts at his goal. Finally, toward the end of the 1940's, Doctor Chambers, undaunted in his ambition, came in contact with a group of several other farsighted and dedicated men who shared his aims. Along with Francis Massie, M.D., Coleman Johnston, M.D., Mr. Guy Huguelet, Mr. Arnold Hanger, and several others, Doctor Chambers helped to create the Kentucky Medical Foundation, which was to serve as the vehicle for Doctor Chambers' dream. It was the Foundation that campaigned for the Medical Center (it had been decided during this period that a school of medicine would be insufficient) and finally enlisted the support of Mr. Albert B. Chandler for whom the present Medical Center is named.

In 1957, ground was broken for the Medical Center; that same year Doctor Chambers resigned as Director of the University of Kentucky Health Service. Upon the celebration of the groundbreaking, Governor Chandler presented Doctor Chambers with a silver tray which bore the following inscription:

> "To John S. Chambers commemorating the groundbreaking for the University of Kentucky Medical Center, December 12, 1957. You had the vision of a great medical center and worked for its achievement."

It is not to be assumed from Doctor Chambers' tireless efforts in behalf of the Medical Center that he isolated himself from other currents in the modern world. It is to his greater credit that he kept his dream in the context of the needs of the Commonwealth and the Nation and visualized the Medical Center in reference to the development of the medical sciences and arts.

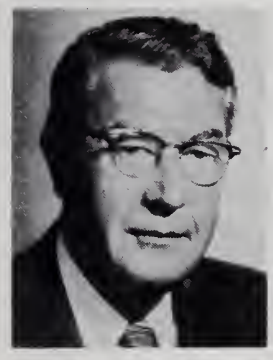
Besides being a great educator, administrator, and man of vision, Doctor Chambers was widely known as a fine gentleman, a tender and compassionate family man, and an altruistic humanist who deeply felt the needs and anguishes of humanity in general. His worth as a friend and confidant will long be remembered by those whose lives he touched.

NOTE: A Memorial Scholarship Fund to annually assist needy medical students has been established at the Albert B. Chandler Medical Center of the University of Kentucky. Donations to the Chambers Fund, designed to help deserving young men and women, are tax deductible. Any contributions may be made payable to the University of Kentucky—John S. Chambers Medical Scholarship Fund—and sent to Room 204, Administration Building, University of Kentucky, Lexington, Kentucky 40506.

ORGANIZATION SECTION

Carl Hoffman, M.D., AMA President-Elect, to Speak At 1972 Interim Meeting, April 13-14

President-Elect of the AMA, Carl Hoffman, M.D., of Huntington, W. Virginia, is among those slated to speak during the 1972 KMA Interim Meeting set for April 13-14 at the Somerset Holiday Inn. Well versed in the problems confronting medicine today, Doctor Hoffman will discuss, "Liability Insurance" and "What's Happening in Health Care Costs."



Doctor Hoffman

A native of Ironton, Ohio, Doctor Hoffman has held many offices in local, state, and national medical organizations. He served as a delegate from West Virginia to the AMA from 1958 until his election to the AMA Board of Trustees in 1969. Doctor Huffman was chosen AMA Secretary-Treasurer in 1970 and President-Elect in 1971.

Other outstanding personalities invited to participate on the Association's top socioeconomic program of the year include Ira C. Layton, M.D., Kansas City, Missouri, Chairman of the Board, National Association of Blue Shield Plans; Mr. Joe Miller, Chicago, Assistant Executive Vice-President, AMA; and Mr. Frank Groschelle, Atlanta, Department of Health, Education, and Welfare.

One subject to be featured during the two-day session is, "The Medical Foundation Concept," with a full discussion of KMA's new Kentucky Foundation for Medical Care. Friday's session will highlight presentations on, "The Cost of Health Care," and is to include a panel discussion on the findings of the recent Kentucky Chamber of Commerce state-wide forums on that subject.

In following last year's popular meeting format, no business meetings are scheduled on Thursday and Friday afternoons, so KMA members and their families can take advantage of the many recreational facilities available in the Somerset area. Special sports activities are being planned.

KMA President, John S. Harter, M.D., urges all physicians to make plans to attend this outstanding, two-day session and to secure reservations as soon as possible. For your convenience, a reservation form can be found on page 127 of this *Journal.*

WA-KMA Plans Meeting, Workshop At Shakertown, April 4-5

The Executive Committee of the Woman's Auxiliary to KMA recently voted to hold a Spring Board Meeting and Workshop on April 4-5 at Shakertown.

The Board will meet on the afternoon of April 4, and the Workshop will be held on the morning of April 5. Mrs. John M. Chenault, a member of the AMPAC Board of Directors, will be guest speaker.

All members of WA-KMA and their guests are urged by Mrs. David Stevens, Lexington, President of the organization, to stay for dinner and overnight on April 4.

The members are also invited to attend the 1972 KMA Interim Meeting to be held at the Holiday Inn of Somerset on April 13-14. A hospitality room for Auxiliary members and friends will be open both days.

Mrs. Stevens says of the Interim Meeting, "Plan now to take advantage of this opportunity to learn about current health care problems and to have a mini-vacation with your husband."

First Trustee District to Hold Meeting, February 23

W. Eugene Sloan, M.D., Paducah, Trustee of the First KMA Trustee District, has announced a meeting of the group on February 23. To be held at the Paducah Country Club, the meeting will begin at 6:00 pm.

Henry B. Asman, M.D., Louisville, President of the Kentucky Foundation for Medical Care, Inc., will be the guest speaker. He will discuss the new foundation and its functions.

Other upcoming Trustee District meetings include the Eighth District on April 6 in Covington and Thirteenth District on May 2 in Ashland.

AMA House of Delegates Acts On Reports, Resolutions

Delegates to the 25th Clinical Convention of the American Medical Association held in New Orleans, November 28-December 1, acted on 2 special reports; 20 reports from the Board of Trustees; 8 from the Council on Medical Education; 4 from the Council on Medical Service; 2 from the Council on Constitution and Bylaws; and 1 each from the Judicial Council and Council on Long-Range Planning and Development, plus 72 resolutions.

Actions taken by the House of Delegates included the creation of a special section for medical students, and one for interns and residents; ordering open hearings at the two 1972 conventions to explore questions relating to AMA organizational structure and programs, questions raised by AMA President Wesley W. Hall, M.D., last June in Atlantic City and again in New Orleans; approving a vote on the Board of Trustees for the AMA Vice-President; approving participation of non-members of the AMA in AMA scientific programs; and directing that the AMA lead in developing a national program for certification of the assistant to the primary care physician.

Doctor Hall addressed the group saying, "Frankly, I am troubled and disturbed by what I see and hear, and I am more convinced than ever that we need a basic review of our Association's organizational structure."

He did not envision "a study that will continue over a period of years and years and become bogged down in trying to anticipate problems and programs of the distant future. We all recognize the need for long-range planning, but my concern calls for more immediate action."

Doctor Hall's address and Resolution 50 which also called for organizational review, were studied and discussed in reference committee. The committee also studied two reports dealing with the question of a Constitutional Convention, from the Councils on Constitution and Bylaws and Long Range Planning and Development, both of which recommended against holding a Constitutional Convention. Reference Committee discussion was overwhelmingly contrary to Doctor Hall's address.

Milton Helpern, M.D., the chief medical examiner for New York City, was chosen by the House to receive the AMA Distinguished Service Award for 1972. It will be presented at the annual convention in June, 1972, in San Francisco.

Mac F. Cahal, J.D., Executive Director of the American Academy of Family Physicians for nearly a quarter of a century, received the Layman's Citation for Distinguished Service.

ACP Admits Dr. Avlonitis

Emmanuel G. Avlonitis, M.D., Louisville, was recently admitted to the American College of Physicians. One of the 242 physicians in the United States and Canada who were selected, Doctor Avlonitis fulfilled the ACP requirements of having graduated from a medical school at least six years prior to application and having been a practitioner, teacher, or researcher in internal medicine for at least two years.

Kentucky Physicians Attend AMA Clinical Convention

Forty-nine Kentucky physicians attended the AMA Clinical Convention held in New Orleans, November 28-December 1, according to the records of AMA. A complete list of those attending follows:

Steve Aaron, M.D., Louisville
John O. Allen, M.D., Louisville
Charles S. Astrove, M.D., Fort Campbell
Charles J. Bisic, M.D., Louisville
Charles J. Bohle, M.D., Paducah
George F. Brockman, M.D., Greenville
Charles G. Bryant, M.D., Louisville
Ward E. Bullock, M.D., Lexington
James C. Cantrill, M.D., Georgetown
Guy N. Copeland, M.D., Lexington
M. R. Cronen, M.D., Louisville
Harvey E. Dondershine, M.D., Fort Campbell
J. Thomas Giannini, M.D., Louisville
John S. Harter, M.D., Louisville
Daryl P. Harvey, M.D., Glasgow
Kenneth P. Haywood, M.D., Madisonville
Lee C. Hess, M.D., Florence
Michael Holthouser, M.D., Louisville
Wilbur R. Houston, M.D., Richmond
Wilfred D. Janney, M.D., Covington
Douglas H. Jenkins, M.D., Richmond
W. N. Jennings, M.D., Louisville
Richard D. Kruer, M.D., Southgate
Enrique Lacayo, M.D., Middletown
Robert W. Lykins, M.D., Louisville
J. E. McKinney, M.D., Maysville
Wyatt Norvell, M.D., Newcastle
Rwogo Rman, M.D., Glasgow
C. Kenneth Peters, M.D., Louisville
Glenn L. Pfister, M.D., Fort Thomas
R. J. Phillips, Jr., M.D., Owensboro
Richard F. Plant, M.D., Madisonville
John C. Quertermous, M.D., Murray
Aaron Rabb, M.D., Louisville
Fred C. Rainey, M.D., Elizabethtown
Vadakepat Ramgopal, M.D., Lexington
Evaristo Riestra, M.D., Ashland
Robert C. Sabatelle, M.D., Fort Campbell
Charles B. Severs, M.D., Louisville
Stewart D. Shull, M.D., Fort Campbell
Fred S. Sigda, M.D., Madisonville
Charles C. Smith, Jr., M.D., Louisville
David B. Stevens, M.D., Lexington
Garnett J. Sweeney, M.D., Liberty
Elvis R. Thompson, M.D., Pikeville
Marguerite E. T. Thompson, M.D., Pikeville
Donald T. Varga, M.D., Louisville
William G. West, Jr., M.D., Madisonville
Carroll L. Witten, M.D., Louisville

18th Annual Symposium Planned On Cardiovascular Diseases

The 18th Annual Symposium on Cardiovascular Diseases will be held in Louisville on March 22 and 23 at Stouffer's Louisville Inn, according to Henry W. Post, M.D., Chairman of the Symposium Committee.

The theme for the sessions is, "Hypertension—Coronary Heart Disease—and Related Topics." Highlights of the meeting will be the "Bernard D. Rosenblum Memorial Lecture" by Dean T. Mason, M.D., Davis, California, and "Grand Rounds" at the Medical Sciences Center, University of Louisville, conducted by David H. Spodick, M.D., Director of Cardiology Division, Tufts University School of Medicine, Boston, Massachusetts.

Other speakers for the sessions are Frank A. Finnerty, M.D., Washington, D.C.; James J. Morris, Jr., M.D., Durham, North Carolina; Paul L. McHenry, M.D., Indianapolis, Indiana; and George C. Morris, Jr., M.D., Houston, Texas.

Physicians throughout Kentucky and the surrounding states are invited to attend.

The Symposium is sponsored by the Heart Association of Louisville and Jefferson County; the University of Louisville School of Medicine; the Jefferson County, Kentucky Academy of Family Physicians, and The Council on Clinical Cardiology, American Heart Association. Registration is free.

Rheumatic Diseases Symposium Scheduled for April 27

The Eighth Annual Rheumatic Disease Symposium, jointly sponsored by the University of Louisville School of Medicine and the Kentucky Chapter of the Arthritis Foundation, is planned for Thursday, April 27.

The all-day conference will be held in the Amphitheater of the Health Sciences Medical Center in Louisville.

The program will emphasize pathogenesis and current developments in laboratory procedures relevant to diagnosis and management of the major rheumatic disorders. Topics will include: rheumatoid arthritis, osteoporosis, infectious agents and connective tissue diseases, systemic lupus erythematosus, new work with experimental models of osteoarthritis, and painful disorders of the foot.

The Program Director, David H. Neustadt, M.D., Chief of Section on Rheumatic Diseases, University of Louisville, announced that the symposium will consist of morning and afternoon sessions with lectures and panel discussions presented by a visiting faculty of nationally known authorities and outstanding teachers, and medical staff from the University of Louisville.

Guest faculty will include: John S. Davis, IV, M.D., Associate Professor of Medicine, University of Virginia School of Medicine; Nicholas J. Giannestras, M.D., Associate Professor of Orthopedic Surgery, University of Cincinnati College of Medicine; David S. Howell, M.D., Professor of Medicine and Head, Section on Rheumatology, University of Miami School of Medicine; Roland W. Moskowitz, M.D., Associate Professor of Medicine, Case Western Reserve University School of Medicine; Gordon C. Sharp, M.D., Professor of Medicine and Director, Section of Immunology and Arthritis, University of Missouri School of Medicine; and John R. Ward, M.D., Professor of Medicine and Chief, Division of Arthritis, University of Utah School of Medicine.

There is no registration fee. Further information and a program are available through Symposium Program Committee, Kentucky Arthritis Foundation, 1381 Bardstown Road, Louisville, Kentucky 40204.

Ky. Physicians Are Appointed To AMA Councils, Committees

Five Kentucky physicians were appointed or reappointed to membership on councils and committees of the American Medical Association. The Board of Trustees of AMA recently held its annual review of the membership and made appointments for 1972.

Hoyt D. Gardner, M.D., Louisville, was appointed to the Council on Legislation, and Robert C. Long, M.D., Louisville, to the Council on Voluntary Health Agencies.

William K. Keller, M.D., Louisville, Chairman of the Committee on Medical Aspects of Automotive Safety, was reappointed in the same capacity. J. C. Cantrill, M.D., Georgetown, was reappointed to the Committee on Medicine and Religion, and David B. Stevens, M.D., Lexington, was reappointed to the Committee on Quackery.

William T. Rumage, Jr., M.D., Louisville, retired from the Committee on Community Emergency Services after serving distinguishly for ten years.

Clinical Conference Planned At Lexington Clinic

The Lexington Clinic will hold its 17th Annual Clinical Conference on April 6. The topic for the all-day symposium is, "Hypertension."

Guest speakers for the day are Edward D. Freis, M.D., Senior Medical Investigator, Veterans Administration Hospital, Washington, D. C., and Carlos R. Ayers, M.D., Virginia Heart Association Research Professor of Cardiology, University of Virginia School of Medicine, Charlottesville, Virginia.

Lexington Clinic staff participants in the program are: Allen L. Cornish, Jr., M.D., Cardiology; M. Cary Blaydes, M.D., Cardiology; Robert B. Thompson, M.D., Obstetrics; Vincent Taormina, M.D., Neurology; and Charles H. Nicholson, M.D., Surgery.

Subjects to be discussed include the problem and approach to the patient, etiologies of hypertension, and the medical and surgical treatment of the illness.

Five hours of prescribed credit from the American Academy of Family Physicians have been applied for.

Abortion Seminar Presented By KMA and KBA

On Saturday, January 15, KMA and the Kentucky Bar Association presented a seminar on abortion at Memorial Hall on the University of Kentucky campus.

Approximately 200 people, comprised of physicians, lawyers, and their wives, along with a number of medical and law students, were in attendance. Also invited were the Governor and Lieutenant Governor of the State, along with members of the General Assembly.

Well-known speakers on the subject of abortion were assembled for the program. Participants included Christopher Tietze, M.D., New York, Director of the Association for the Study of Abortion; John C. Willke, M.D., Cincinnati, a member of the Ohio Citizen's Committee on Sex Education; David J. Young, J.D., Columbus, the principal trial counselor defending the constitutionality of Ohio's anti-abortion law; and Robert Sedler, J.D., Lexington, general counsel for the Kentucky Civil Liberties Union.

After each speaker was given the opportunity to express his views on this controversial issue, a question-and-answer period was held.

Ky. OB-GYN Society Plans Symposium, May 12, 13

The Kentucky Obstetrical and Gynecological Society, in celebration of its Silver Anniversary, will present the Third Biennial Symposium, "Cancer in Women," on May 12 and 13. Supported by the Kentucky Division of the American Cancer Society, the meeting will be held at Stouffer's Louisville Inn, according to Program Chairman, Laman A. Gray, M.D., Louisville.

Speakers will include Professor Hans-Ludvig Kottmeier, Karolinska Institute, Radiumhemmet, Stockholm; Roy Hertz, M.D., Associate Director, Bio-Medical Division, Rockefeller University, New York City; Justin J. Stein, M.D., Professor of Radiology, University of California at Los Angeles; and Howard Ulfelder, M.D., Professor of Gynecology, Harvard University, Boston, Mass.

There will be no charge for registration. Interested physicians can obtain further information from: Clinton R. Potts, M.D., 750 Medical Towers South, Louisville, Kentucky 40202.

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In Memoriam

GEORGE B. BREIDENTHAL, M.D.
Louisville
1870 - 1971

George B. Breidenthal, M.D., a retired Louisville physician, died December 14 in Alhambra, California. Doctor Breidenthal was a 1905 graduate of the University of Louisville School of Medicine. He was a member of the Jefferson County Medical Society and the Kentucky and American Medical Associations.

EARL J. EVERSOLE, M.D.
Louisville
1894 - 1971

Earl J. Eversole, M.D., a retired Louisville family physician, died December 2. A native of London, Kentucky, Doctor Eversole served in the U.S. Army during World War I and then graduated from the University of Louisville School of Medicine in 1931. He was a member of the Jefferson County Medical Society and the Kentucky and American Medical Associations.

AARON A. SHAPER, M.D.
Louisville
1902 - 1971

Aaron A. Shaper, M.D., a retired Louisville pediatrician, died December 21. A 1925 graduate of the University of Louisville School of Medicine, Doctor Shaper began practicing in Louisville in 1929. After serving in the U.S. Navy during World War II and the Korean Conflict, Doctor Shaper studied medical and tropical disease epidemiology at the National Naval Center in Bethesda, Md., and was officer-in-charge of the unit in epidemiology for the 11th Naval District at Long Beach, Calif. Doctor Shaper was a Democratic candidate for mayor of Louisville in the 1969 primary. He was a member of the Jefferson County Medical Society and the Kentucky and American Medical Associations.

There are an estimated 7,500 blind people in Kentucky today.

Gloucoma is the second leading cause of blindness in the nation today. At this moment, an estimated 27,000 Kentuckians 35 years of age and older are threatened with blindness from glaucoma, which for the most part can be controlled and sight saved if discovered and treated in its early stages.

NEWS ITEMS

Beth Penrose, M.D., Morehead, is presently practicing anesthesiology in association with Warren H. Proudfoot, M.D., J. Hunter Black, M.D., Richard W. Carpenter, M.D., and James D. Hull, III, M.D. Doctor Penrose is a graduate of the University of Kentucky College of Medicine. She interned at the Henry Ford Hosptial, Detroit, Mich., and served her residency at the University of Kentucky College of Medicine.

John T. Queenan, M.D., New York, was recently appointed Chairman of the Department of Obstetrics and Gynecology, University of Louisville School of Medicine. Doctor Queenan, formerly associate professor of obstetrics and gynecology at Cornell University Medical College, New York, is a 1958 graduate of that school. He is nationally known for his research on RH disease.

Joseph C. Parker, Jr., M.D., has joined the faculty of the University of Kentucky College of Medicine as Director of Surgical Pathology. A specialist in pathology and neuropathology, Doctor Parker graduated from the Medical College of Virginia, interned at the University of Michigan, and served residencies at Mayo Clinic and Duke University. He was on the faculties of both Duke and Harvard universities before becoming associated with the University of Kentucky.

CORRECTION

Maurice E. John, Jr., M.D., is now serving the second year of a residency in ophthalmology at the University of Louisville School of Medicine. He is not practicing ophthalmology in Louisville as was stated in the "News Items" in the December issue of *The Journal.*

KENTUCKY MEDICAL ASSOCIATION
INTERIM MEETING, APRIL 13-14, 1972
REQUEST FOR ACCOMMODATIONS RESERVATION

Complete and mail directly to Holiday Inn of Somerset.

☐ NUMBER OF NIGHTS ☐ 6 PM ☐ 4 PM ☐ GUARANTEED

☐ 1 ROOM, 1 BED
☐ 1 ROOM, 2 BEDS
☐ 2 ROOMS, 1 BED
☐ 2 ROOMS, 2 BEDS
☐ 2 ROOMS, 1 & 2 BEDS

RESERVATIONS SHOULD BE MADE
NO LATER THAN APRIL 1, 1972

Names of those sharing accommodations:

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Name_____

Name_____

Address to which confirmation to be sent: _____
Street Address

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City State Zip Code

Return reservation request to: Holiday Inn of Somerset, P.O. Box 738, Somerset, Kentucky 42501; telephone (606) 678-8115.

Note: This reservation is for the Kentucky Medical Association meeting, April 13-14, 1972.

Foundation Report

Kentucky Foundation for Medical Care, Inc., Board of Directors

Henry B. Asman, M.D., Louisville, President

KMA Headquarters Office **January 13, 1972**

The Board of Directors of the Kentucky Foundation for Medical Care held its first formal meeting on January 13, 1972. The Foundation became officially incorporated in December when incorporation papers were filed with the Secretary of State and the Jefferson County Clerk. Although tax-exempt status has not yet been granted by the Internal Revenue Service, it was reported that all required material had been submitted and IRS approval should be forthcoming shortly.

At this meeting, all previous actions and proposals suggested by the Incorporators at their initial meeting in November, 1971, were adopted, including the election of officers and the establishment of Foundation committees.

Reports were heard from Joseph Hamburg, M.D., Lexington, Chairman of the Foundation's Health Manpower and Placement Services Committee, and E. C. Seeley, M.D., London, Chairman of the Continuing Medical Education Committee, on their respective committees' meetings. Marvin A. Bowers, Jr., M.D., Louisville, Chairman of the Finance Committee, reported on funding sources and activities and discussed recent developments in application for grants for the peer review program.

It was noted that the Foundation has been requested to play a major role in the activities at the KMA Interim Meeting in April, and specific subjects were discussed. The Board decided that Foundation participation at the Interim Meeting should concern the history and priorities of the Foundation, liability insurance, and the subject of quality medical care review in the future of probable developments in the health care field. It was suggested that the next meeting of the Foundation Board should be held sometime during the Interim Meeting, at which time it was anticipated that IRS approval of the request for tax-exempt status would be granted.

Gehring M. Robinson, M.D., is now practicing in association with Marvin Lucas, M.D., and David Shipp, M.D., in Louisville. A specialist in colon-rectal surgery, Doctor Robinson graduated from the University of Illinois College of Medicine, interned at Cook County Hospital, Chicago, and served residencies at the University of Louisville School of Medicine and the Ferguson Clinic, Grand Rapids, Mich.

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Many people lose interest in food as they grow older. Some of them are fussy eaters—with only a few favorite foods. Others become indifferent to foods—because planning and preparing meals becomes a chore. Here Campbell's Soups can help —for these four very good reasons:

Appeal With a variety of tastes, textures, aromas, and colors, Campbell's Soups can add interest and appetite appeal. And they're easy to eat—ingredients are tender, bite-size.. Even patients on special diets will find soups they can enjoy among the more than 50 different varieties available.



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Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

Recommend Campbell's Soups . . . and, of course, enjoy them yourself. Remember, *there's a soup for almost every patient and diet . . . and for every meal.*

the 3 phases of Eve



All women are not equal in their endogenous hormonal output. And, while all oral contraceptives are fundamentally effective, they exhibit **differences in their activity levels and estrogen-progestogen ratios that affect different women differently**—in both short and long-term use. Some brands may be insufficient for the woman's needs or else may exceed them.

Searle offers a family of O.C. products that covers the range of women's needs to help you provide the right pill for the right woman at the right time.

References: **1.** Editorial: Oral Contraceptives Which Pill for Which Patient? Patient Care 3:90-115 (Feb.) 1969 and 4:135-145 (June 15) 1970 **2.** Greenblatt, R. B.: Progestational Agents in Clinical Practice, Med. Sci. *18*:37-49 (May) 1967 **3.** Kistner, R. W.: Gynecology Principles and Practice, ed. 2, Chicago, Year Book Medical Publishers, 1971 **4.** Kistner, R. W.: The Pill: Facts and Fallacies About Today's Oral Contraceptives, New York, Delacorte Press, 1968. **5.** Nelson, J. H.: Clinical Evaluation of Side Effects of Current Oral Contraceptives, J. Reprod. Med. 6:50-55 (Feb.) 1971 **6.** Orr, G. W.: Oral Progestational Agents: Therapy and Complications, S. Dakota J. Med. *22*:11-17 (Jan.) 1969

the Ovulen phase

Most women* with a **balanced hormone profile a normal menses** do best on a middle-of-the-road p that is neither estrogen dominant nor strongly progestogen dominant.

(*Typical clues—normal body build and breasts feminine appearance, healthy skin and hair. Vagin cytology slide—balanced "pink and blue.")

Some women having problems on other O.C.s might do well on Ovulen.

Ovulen has a distinctive hormonal balance that combines moderate estrogenic activity with a slig progestogen dominance. It has an excellent recor of patient acceptance.

Ovulen®

Each white tablet contains: ethynodiol diacetate 1 mg./mestranol 0.1 mg

SEARLE

For brief summary of prescribing information, see following page.



the Demulen phase

Many women* who secrete **more estrogen** than most do well on a pill with lower estrogen activity and an increased progestogen overbalance.

(*Typical clues—shorter, plumper, full-breasted, with glowing skin and no wrinkles. Vaginal cytology slide "pink.")

Some women with special conditions that may be aggravated by higher estrogen-activity products may do better on this ratio.

Demulen combines minimal estrogenic activity with a moderate ratio of progestogen overbalance. It is particularly well suited to the young when low-dose (activity) is preferred. Demulen offers little risk of the most potent progestogen side effects; early breakthrough bleeding is often transient.

Demulen®

Each white tablet contains: ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.
Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.
Both Ovulen and Demulen are available in 21- and 28-pill schedules.

the Enovid-E phase

Some women* who secrete **less estrogen** than most do best on a pill with a moderate estrogen overbalance.

(*Typical clues—oily complexion, acne, hirsutism, masculinity, flat chest. Vaginal cytology slide—"blue.")

Patients with estrogen deficiency may show:

premenopausal syndrome	intermittent depression
early-cycle bleeding	increased appetite
scanty menses	steady weight gain

vaginal candidiasis

Enovid-E not only provides increased estrogenic activity with low progestogen activity, but also contains the only progestogen that is not antiestrogenic. Therefore it offers less risk of high-dose progestogen side effects.

Enovid-E®

Each tablet contains: norethynodrel 2.5 mg., mestranol 0.1 mg.

Oral contraceptives are complex medications and, after reference to the prescribing information, should be prescribed with discriminating care.

for the 3 phases of Eve:

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Ovulen®

Each white tablet contains:
ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen®

Each white tablet contains:
ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

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norethynodrel 2.5 mg./mestranol 0.1 mg.

Actions—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Indication—Enovid-E is indicated for oral contraception.

The *Special Note, Contraindications, Warnings, Precautions* and *Adverse Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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Staphylococcus aureus	11371	●●●	●	●
Staphylococcus aureus	8096	●●●	●	●
Staphylococcus aureus	10390	●●●	●	●
Staphylococcus aureus	6342	●●●	●	●
Staphylococcus epidermidis	17917	●●●	●	●
Staphylococcus sp.	13565	●●●	●	●●
Mycobacterium smegmatis	19420	●●●	●●	●●
Listeria monocytogenes	13932	●●●	●●	●●●
Streptococcus pyogenes	7958	●	●	●
Streptococcus mitis	903	●	●	●
Streptococcus sp.	12403	●	●	●
Bacillus anthracis	14578	●	●●	●●
Gram Negative				
Alcaligenes tolerans	19359	●●●	●●	●●●
Neisseria gonorrhoeae	19424	●●	●	●
Neisseria menigitidis	13077	●●●	●	●
Proteus vulgaris	8427	●●●	●	○
Escherichia coli	10536	●	○	○
Escherichia coli	11229	●	○	○
Escherichia coli	11698	●	○	○
Klebsiella pneumoniae	12833	●	○	○
Salmonella typhi	9993	●	○	○
Salmonella typhi	6539	●	○	○
Salmonella typhimurium	13311	●	○	○
Herellea sp.	11959	●	○	○
Pseudomonas aeruginosa	10145	○	○	○
Pseudomonas aeruginosa	7700	○	○	○
Pseudomonas aeruginosa	9027	○	○	○
Pseudomonas aeruginosa	14210	○	○	○
Proteus rettgeri	9250	○	○	○
Proteus morganii	9237	○	○	○

KEY: ZONE OF INHIBITION
●●● = 18.0 mm or larger
●● = 12.0 mm to 17.9 mm
● = Less than 11.9 mm
○ = No Inhibition

Test Method: The three antibacterial soaps were evaluated by means of the standard Protein Adsorption Test, conducted by a recognized independent laboratory, using A.T.C.C. organisms.

*The bacteria were those most frequently named in a nationwide survey of 134 hospitals.



for you and your patients.

For samples of P-300 and product literature, please write:

Professional Services Department
COLGATE-PALMOLIVE COMPANY
740 North Rush Street
Chicago, Illinois 60611



rheumatoid arthritic blowup...

Tandearil® Geigy

oxyphenbutazone NF tablets of 100 mg.

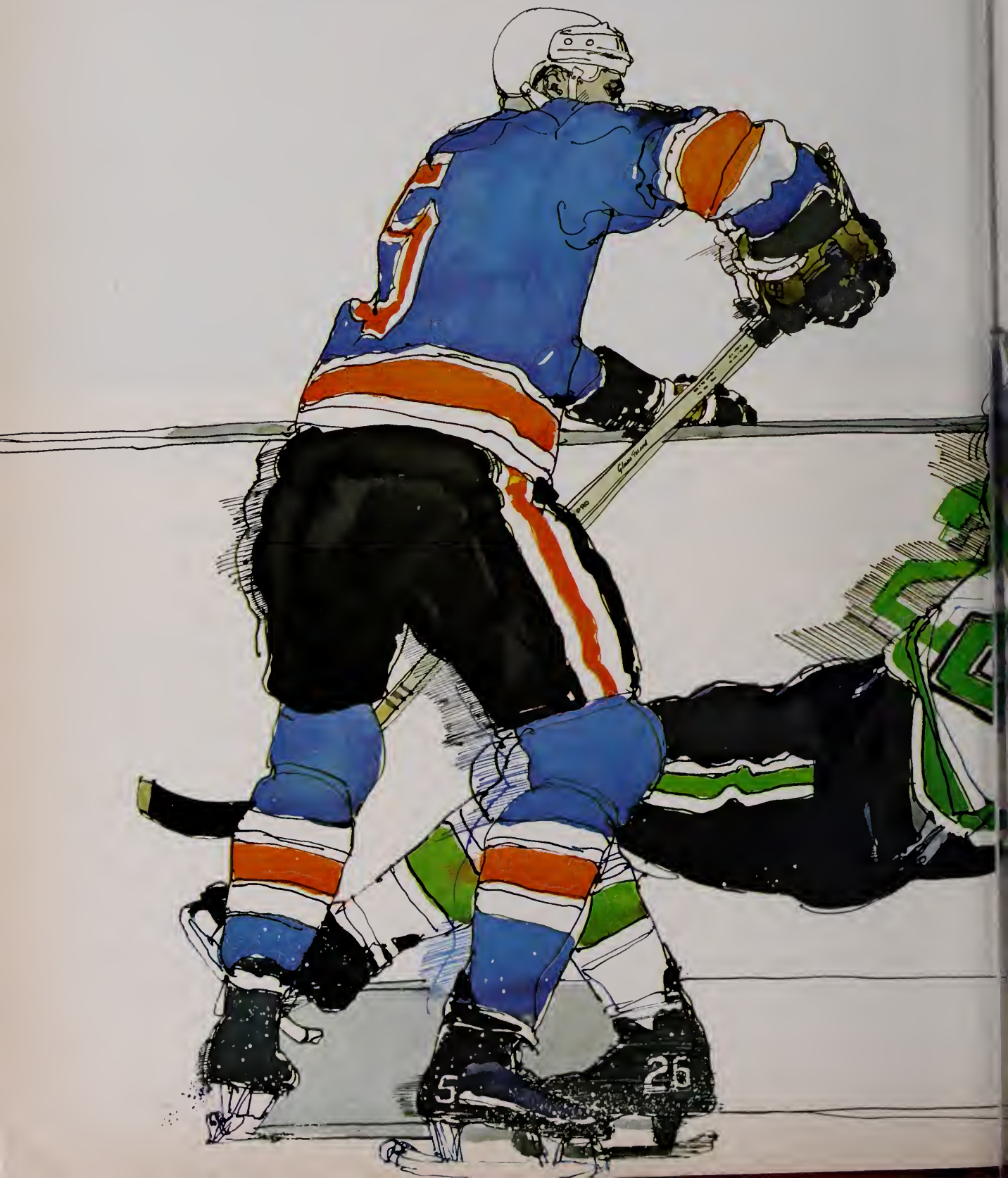
ortant Note: This drug is not a simple analgesic. ot administer casually. Carefully evaluate patients re starting treatment and keep them under close ervision. Obtain a detailed history, and complete ical and laboratory examination (complete ogram, urinalysis, etc.) before prescribing and at uent intervals thereafter. Carefully select patients, ding those responsive to routine measures, con- idicated patients or those who cannot be observed uently. Warn patients not to exceed recommended age. Short-term relief of severe symptoms with smallest possible dosage is the goal of therapy. age should be taken with meals or a full glass of . Patients should discontinue the drug and report ediately any sign of: fever, sore throat, oral ons (symptoms of blood dyscrasia); dyspepsia, astric pain, symptoms of anemia, black or tarry ls or other evidence of intestinal ulceration or orrhage, skin reactions, significant weight gain or ma. A one-week trial period is adequate. Discon- e in the absence of a favorable response. Restrict tment periods to one week in patients over sixty. *cations:* Acute gouty arthritis, rheumatoid arthritis, matoid spondylitis.
traindications: Children 14 years or less; senile ents; history or symptoms of G.I. inflammation or ration including severe, recurrent or persistent epsia; history or presence of drug allergy; blood crasias; renal, hepatic or cardiac dysfunction; ertension; thyroid disease; systemic edema; natitis and salivary gland enlargement due to the); polymyalgia rheumatica and temporal arteritis; ents receiving other potent chemotherapeutic nts, or long-term anticoagulant therapy.
nings: Age, weight, dosage, duration of therapy, tence of concomitant diseases, and concurrent nt chemotherapy affect incidence of toxic reac- s. Carefully instruct and observe the individual ent, especially the aging (forty years and over) have increased susceptibility to the toxicity of the g. Use lowest effective dosage. Weigh initially redictable benefits against potential risk of severe, n fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.
Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.
Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.
(B) 98-146-800-E

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

TA-8356-9

WHAT'S THE PENALTY FOR BOARDING?





Two minutes in the penalty box for the offender and possibly months of painful skeletal muscle spasm for the victim.

For the skeletal muscle spasm of back sprains, Valium® (diazepam) can be a valuable adjunct. A dose of 2-10 mg, three or four times a day, goes to work to help break up the cycle of spasm/pain/spasm. The resultant relief of skeletal muscle spasm may permit greater mobilization of the affected muscles and may help the patient resume usual activities sooner than otherwise possible.



Paraspinal muscle mass frequently vulnerable to this type of trauma.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

VALIUM® (diazepam)

adjunct in skeletal muscle spasm

2-mg, 5-mg, 10-mg tablets

Ken Dallison



Trocinate®

BRAND THIPHENAMIL HCl

400 mg.

WILLIAM P. POYTHRESS & COMPANY, INC.

Manufacturers of Ethical Pharmaceuticals Since 1856

P. O. BOX 26946, RICHMOND, VA. 23261

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

A gratifying announcement about Empirin® Compound with Codeine



You may now specify up to five refills within six months when you prescribe Empirin Compound with Codeine (unless restricted by state law).

It is significant in this era of increased regulation, that Empirin Compound with Codeine has been placed in a less restrictive category. You may now wish to consider Empirin with Codeine even more frequently for its predictable analgesia in acute or protracted pain of moderate to severe intensity.

Empirin Compound with Codeine No. 3 contains codeine phosphate* (32.4 mg.) gr. ½. No. 4 contains codeine phosphate* (64.8 mg.) gr. 1. *(Warning—may be habit-forming.) Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.

Call it what you will, it may be premalignant

Before

3/29/67 Before therapy with 5%-FU cream. Patient P. T. shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

After

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.



ROCHE Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

ıd Efudex® (fluorouracil) 5% cream can resolve it.

ll it actinic, solar or senile keratoses, ıny regard it as "precancerous."[1,2]

ɔical fluorouracil, considered by some dermatologists to be a major a/ance in the treatment of multiple solar keratoses,[3,4] offers the physi- c n a relatively inexpensive alternative to cryosurgery, electrodesic- c ion and cold knife surgery. Of the topical fluorouracils available, only Eudex offers 2% and 5% solution and 5% cream formulations—formula- t ns that have proved effective in the treatment of these mutliple lesions.

lsual duration of therapy, 2 to 4 weeks.

Sidies showed that with the 2% and 5% Efudex preparations, the usual ɗration of therapy was only 2 to 4 weeks.[5] Other studies with topical forouracil revealed that when concentrations of less than 2% were ɯd, significant numbers of lesions recurred.[6]

'reats the lesions you can't see, too.

ɹmerous lesions, not apparent prior to 2% and 5% Efudex therapy, ɲanifested themselves by definite reactions, while intervening skin ɯmained relatively unaffected.[5] The early eradication of these subclini- ɗ lesions (which may otherwise have undergone further progression) ɲobably accounts for the reduced incidence of future solar keratoses in ɟtients treated with topical fluorouracil—especially with 5% ɲncentrations.[6]

ow to identify solar keratoses.

ɣpically, the lesion—a flat or slightly elevated brown to red-brown ɨpule—is dry, rough, adherent and sharply defined. Multiple lesions ɾe the rule.

redictable therapeutic response.

he response to a typical course of Efudex therapy is usually ɨaracteristic and predictable. After 3 or 4 days of treatment, erythema ɡins to appear in the area of keratoses. This is followed by a moderate ɨ intense inflammatory response, scaling and occasionally moderate ɲderness or pain. The height of this response generally occurs two eeks after the start of therapy and then begins to subside as treatment stopped. Within two weeks of discontinuing medication, the ɨflammation is usually gone. Lesions that do not respond should ɛ biopsied.

eferences: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, rune & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T, and Honeycutt, W. M.: Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *harmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, . 92. 3. Belisario, J. C.: *Cutis, 6*:293, 1970. 4. Sams, W. M.: *Arch. Derm., 97*:14, 1968. Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and lein, E.: *Cancer, 25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



now
Efudex®
(fluorouracil)
cream/solution

Happiness is no more turnover.

Hire the Handicapped

Happiness is a regular paycheck.

Hire a Disabled Veteran



Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Indications: Upper respiratory congestion and hypersecretion associated with: the common cold; acute and chronic sinusitis, vasomotor rhinitis; allergic rhinitis (hay fever, "rose fever," etc.).

Contraindications: Hypersensitivity to any component; concurrent MAO inhibitor therapy; severe hypertension; bronchial asthma; coronary artery disease; stenosing peptic ulcer; pyloroduodenal or bladder neck obstruction. Children under 6.

Warnings: Advise vehicle or machine operators of possible drowsiness. Warn patients of possible additive effects with alcohol and other CNS depressants.

Usage in Pregnancy: In pregnancy, nursing mothers and women who might bear children, weigh potential benefits against hazards. Inhibition of lactation may occur.

Effect on PBI Determination and I^{131} Uptake: Isopropamide iodide may alter PBI test results and will suppress I^{131} uptake. Substitute thyroid tests unaffected by exogenous iodides.

Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

Supplied: Bottles of 50 capsules.

SK&F *Smith Kline & French Laboratories*

Trademark

ORNADE® SPANSULE®

brand of sustained release capsules

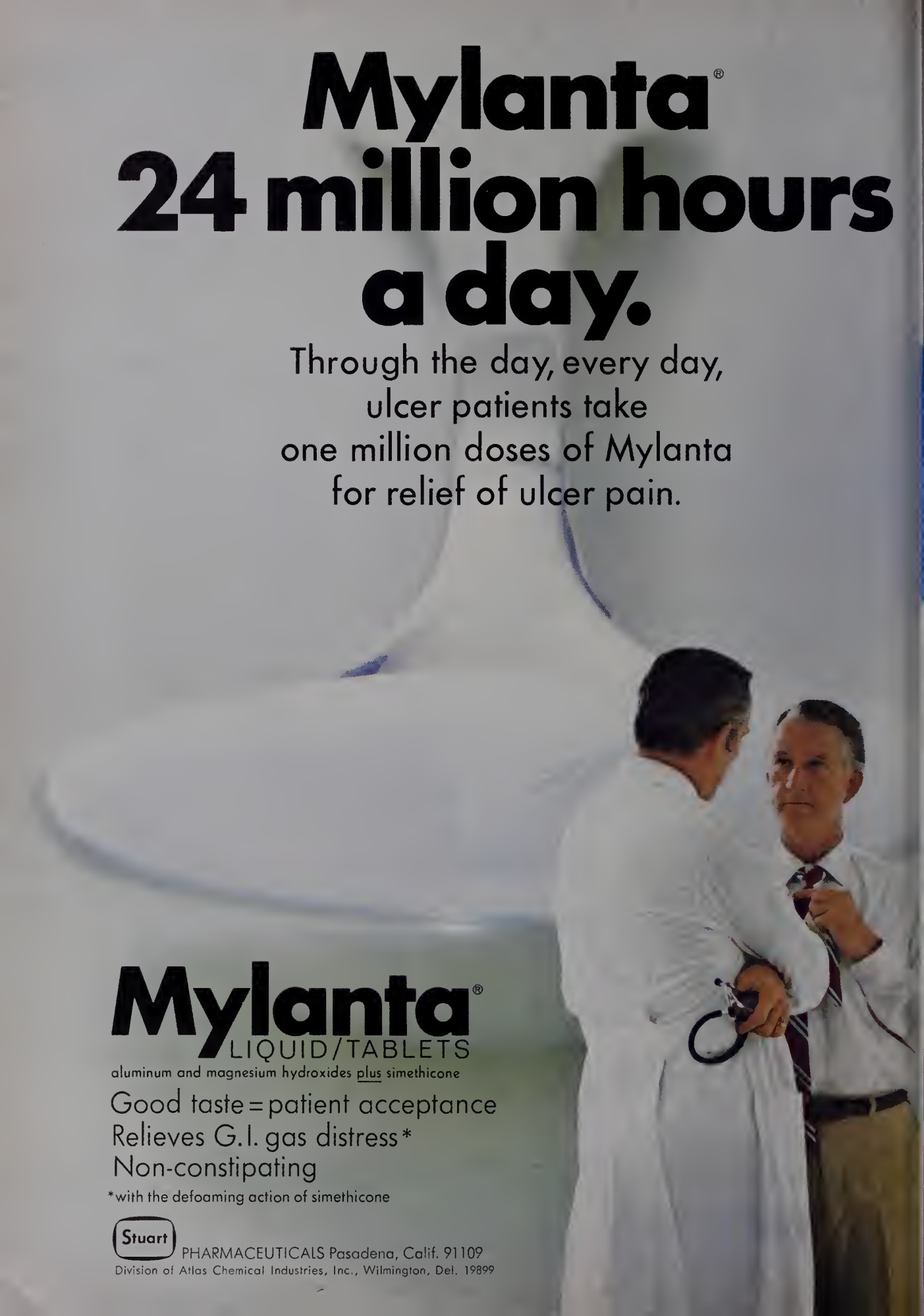
Each capsule contains 8 mg. of Teldrin®(brand of chlorpheniramine maleate); 50 mg. of phenylpropanolamine hydrochloride; 2.5 mg. of isopropamide, as the iodide.

UNCOMMON RELIEF FOR COLD SYMPTOMS

OR-203

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.



Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899

IN ASTHMA
IN EMPHYSEMA



optional therapy

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

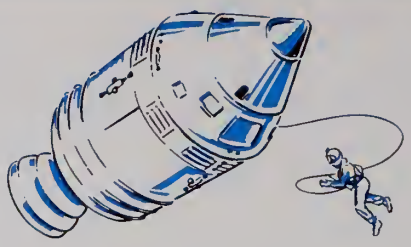
MUDRANE GG-2
A counterpart for Mudrane-2

MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, *300 mg.;* SODIUM ACID PHOSPHATE, *500 mg.*

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

The girth control pill



Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug, in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur with relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause CNS effects such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic cardiovascular effects reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. Allergic phenomena reported include such conditions as rash, urticaria, ecchymosis, and erythema. Gastrointestinal effects such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg. tablet daily, swallowed whole, in midmorning (10 a.m.). TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended.

1-3325 (2876)

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

Painful night leg cramps...



unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

- Prevents painful night leg cramps
- Permits restful sleep
- Provides simple convenient dosage — usually just one tablet at bedtime

Prescribing Infarmatian — Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indicatians:** For the prevention and treatment of nocturnal and recumbency leg muscle cramps, including those associated with arthritis, diobetes, varicose veins, thrombophlebitis, arteriosclerosis and stotic foot deformities. **Cantraindicatians:** Quinamm is contraindicated in pregnancy because of its quinine content. **Precautians/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, ond quinine may produce symptoms of cinchonism, such as tinnitus, dizziness, and gastrointestinal disturbance. Discontinue use if ringing in the ears, deafness, skin rosh, or visual disturbances occur. **Dasage:** One tablet upon retiring. Where necessory, dosoge may be increased to one toblet following the evening meal and one toblet upon retiring. **Supplied:** Bottles of 100 ond 500 toblets.

Merrell

MERRELL-NATIONAL LABORATORIES 1-3508(3050)
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

Trodemark: Quinomm

Quinamm

(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps.



"For generations my family has insisted on Donnagel®-PG," says active young matron Mrs. T. Farnsworth Lipp (of the Upper Lipps), shown here with her charming son. "All the benefits of paregoric—without the unpleasant taste, don't you know? And Junior thinks Donnagel-PG tastes so much like bananas that I never worry about a slip between spoon and Lipp."

A Matter of Taste

With or without a silver spoon, a most tasteful solution in treating acute, non-specific d rrheas: all the benefits of paregoric, without the unpleasant taste. Donnagel®-PG treats a ompanying cramping, tenesmus, and nausea as well as the diarrhea itself. Instead of u pleasant-tasting paregoric, it contains the therapeutic equivalent, powdered opium, t promote the production of formed stools and lessen the urge. And it provides the c nulcent-detoxicant effects of kaolin and pectin, plus the antispasmodic benefits of b ladonna alkaloids. And a good banana flavor to baby any taste.



Donnagel®-PG

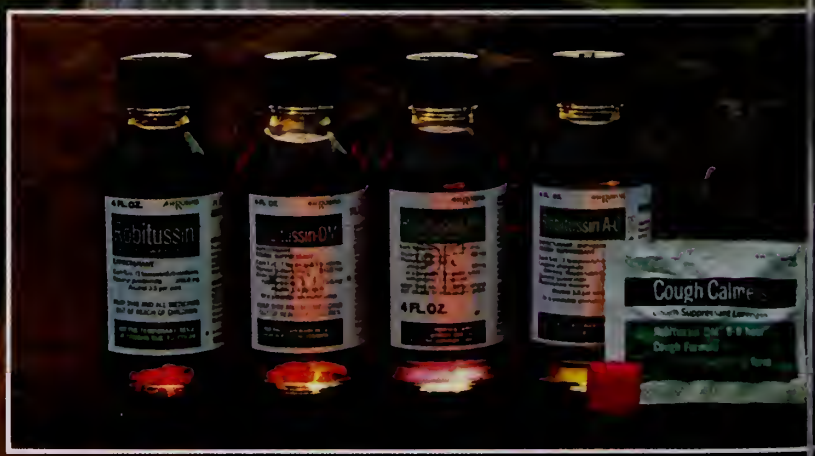
Donnagel with paregoric equivalent

℞ Available on oral prescription or without prescription under limited circumstances as modified by applicable state law.

Each 30 cc. contains: Kaolin, 6.0 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; opine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Powdered opium, USP, 24.0 mg. uivalent to paregoric 6 ml.) (Warning: may be habit forming); Sodium benzoate (preservative), 0 mg.; Alcohol, 5%. A.H. Robins Company, Richmond, Virginia 23220

A·H·ROBINS

coughs are back..



clear the tract!

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ITUSSIN A-C®	●	●			
ITUSSIN-DM®	●		●		●
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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances, syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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The Journal of The KENTUCKY Medical Association



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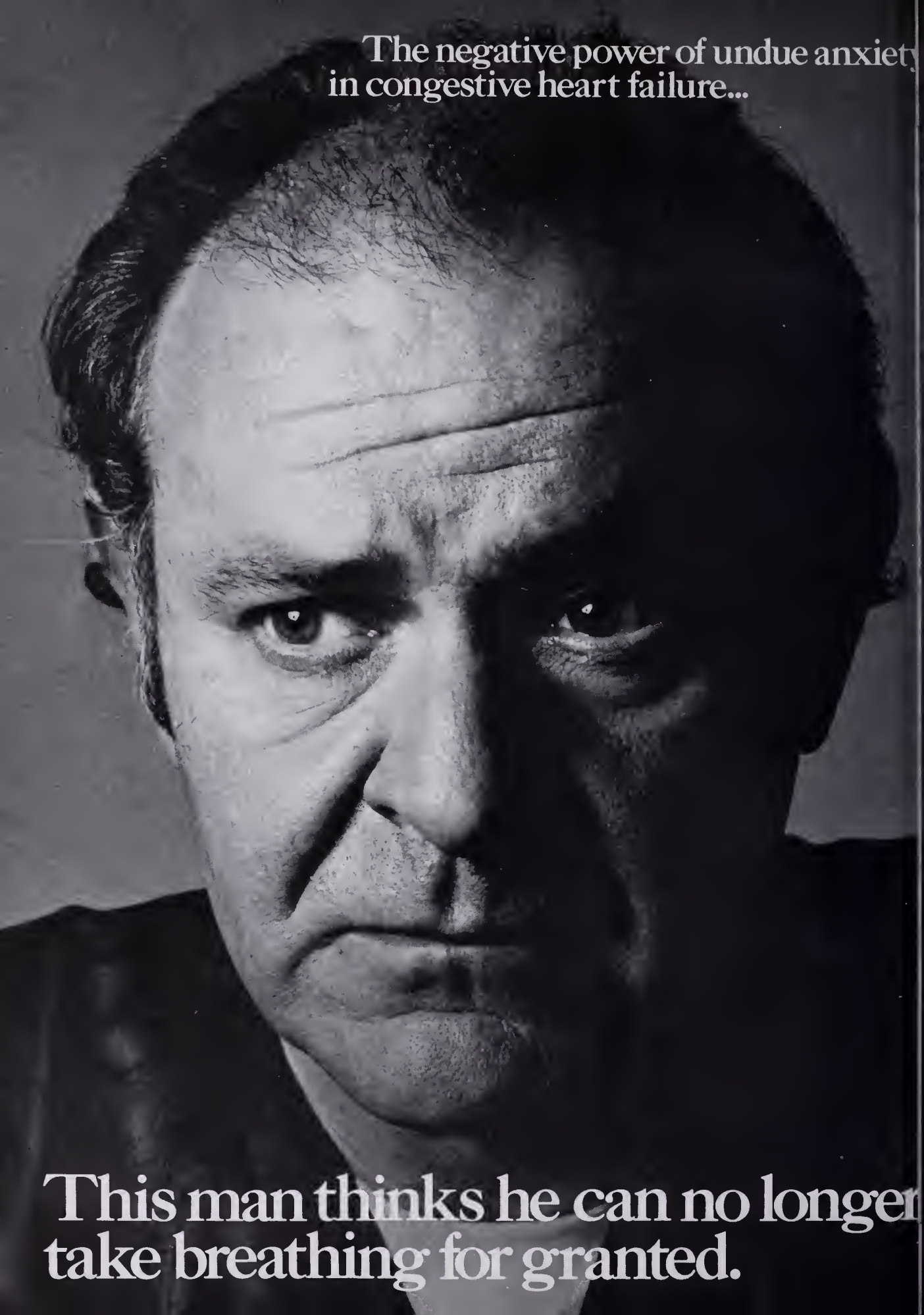
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1972 KMA INTERIM MEETING
April 13-14
Somerset, Kentucky


The negative power of undue anxiety
in congestive heart failure...
This man thinks he can no longer
take breathing for granted.

Typical of many patients with congestive
art failure, he also suffers from severe
xiety, a psychic factor that may influence the character
d degree of his symptoms, such as dyspnea.
s apprehension may also deprive him of the
notional calm so important in maintenance therapy.

id in rehabilitation
cific medical and environmental meas-
s are often enhanced by the antianxiety
ion of adjunctive Libritabs (chlordiaz-
xide). Libritabs can also facilitate treat-
nt of the tense convalescent patient until
ianxiety therapy is no longer required.
ereas in geriatrics the *usual daily dosage*
mg two to four times daily, the *initial*
age in elderly and debilitated patients
uld be limited to 10 mg or less per day,
usting as needed and tolerated.
Concomitant use with primary agents
ritabs is used concomitantly with certain
cific medications of other classes of
gs, such as cardiac glycosides, diuretics,
ihypertensives, vasodilators and oral
icoagulants, whenever excessive anxiety
motional tension adversely affects the
ical condition or response to therapy.
hough clinical studies have not estab-
ed a cause and effect relationship, phy-
ans should be aware that variable effects
blood coagulation have been reported
y rarely in patients receiving oral anti-
gulants and chlordiazepoxide HCl.

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POST-GRADUATE SYMPOSIUM ON RHEUMATIC DISEASES

Amphitheater, Health Science Center **APRIL 27, 1972** Louisville Medical Center
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NICHOLAS J. GIANNESTRAS, M.D. Cincinnati, Ohio	*Painful Disorders of the Foot: Diagnosis and Management*
DAVID S. HOWELL, M.D. Miami, Florida	*Osteoporosis: Pathogenesis and Management*
ROLAND W. MOSKOWITZ, M.D. Cleveland, Ohio	*Osteoarthritis: Pathogenesis and Current Experimental Models*
GORDON C. SHARP, M.D. Columbia, Missouri	*Systemic Lupus Erythematosus: Pathogenesis and Laboratory Features*
JOHN R. WARD, M.D. Salt Lake City, Utah	*Rheumatoid Arthritis and Infectious Agents: Facts and Concepts*

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MESSAGE FROM THE PRESIDENT

Paper work—Is it all essential?

TIME is for all womankind and mankind the yardstick of one's pace of life on earth. For some, time hangs heavy with boredom. The physician is spared the problem of boredom, but increasingly her or his life is complicated by paper work, organizational meetings, committees, and conferences.

The few moments between hospital rounds and appointments, between breakfast and brushing one's teeth, between trying to kiss one's spouse goodnight and sleep, and even between dreams, are being filled in by mountains of paper work, a kaleidoscope of added responsibilities, and the ever-present essential phone calls and messages concerning sick patients. Time for community involvement, an informed interest in contemporary social and ecological issues, exercise, recreation, reading of both medical advances and current events, and more formal continuing medical education is essential for the medical community's contribution to society as a whole and for its special health role.

Where is our time going? Few persons outside the medical profession and few in para-medical work are aware of the amount of paper work an illness entails for the doctor. A typical illness might include preparation of the following: office history and physical examination record; hospital history and physical exam record (the recent office form not acceptable); frequent notation of the patient's progress in the hospital record; hospital discharge summary record; nursing home history and physical, progress notes, and order sheet forms; special form mailed to the office to be filled out authorizing physical therapy in nursing home (reviewing entire program which is already on the chart with an order for PT); discharge summary from nursing home; and admission form for visiting nurse association summarizing all previously described information, plus frequent VNA re-authorization forms.

While the patient is in the hospital, completion of interval stamped authorization for admission and re-authorization forms for hospital stay and completion of drug stop order stamps are required. The completion of the hospital discharge and summary sheet usually includes orders for subsequent medication and other treatment. Reports are often made to or from referring physicians.

(Continued on next page)

This is the second in a series of articles written at the request of KMA President John S. Harter, M.D.

(Continued from page 161)

The same patient and same illness would require completion of separate forms for third party coverage in most instances, either private insurance company forms or Medicare and/or Medicaid forms, plus, in many instances, completion of a second or third co-insurance form. Company, other employer's forms authorizing absence from work, retirement, or sick benefits also appear and for prolonged illness often at monthly intervals. In cases of retirement, several forms appear, including a five or six page Social Security document completed at the patient's expense (and usually the doctor's free, previously recreation, time).

For tax purposes, most physicians find it necessary to keep a separate office record of services performed and financial matters for each patient (which is carried out by office personnel). Certain illnesses require reports to state health departments. In case of birth, death, marriage, or adoption, state certificate forms and various insurance documents are completed, as well as hospital, nursing home, or agency forms. A myriad of tax forms and reports are required quarterly for city, state, and federal government, as well as income tax withholding and Social Security reports for office personnel, all of which the physician must sign and be responsible for the content. In addition to the above, we have absence from school forms, summer camp forms, inquiries regarding previous illnesses from insurance company forms, annual re-evaluation of disability retirement forms, special periodic physical forms in certain patients, such as pilots, engineers, high accident, or over-70 drivers, (in addition to the office exam forms). There are entrance exam forms for schools, colleges, employment, and various government services. Occasional reports to lawyers and court cases regarding medical status in injury and some illness cases are also prepared. Certification forms to insurance companies, Medicare, and Medicaid for annual patient drug expenses, for rental or purchase of wheel chairs, oxygen, breathing apparatus, or other equipment, so that patients may be reimbursed or authorized, add to the total. The average doctor is active on 5 to 20 committees, such as utilization, which require reports regularly.

What can be done to reduce this paper load? Documentation and accountability are necessary, but consolidation and standardization would help. A standard history and physical form (wherever completed) that describes the current condition of the patient should be acceptable to hospital, convalescent home, or rehabilitation center. A copy of the hospital physical, plus a copy of the hospital discharge summary containing standard diagnosis, medication order, activity, diet, and special treatment instruction, is adequate for nursing homes, PT, and VNA, and no additional forms should be required. The insurance industry and the AMA together could prepare a standard, brief exam form for applications to be used by all insurance companies. All school and college forms could be standardized—at present each school has its own. A standard form familiar to the doctor can be completed much more rapidly than an unfamiliar form containing the same information but arranged differently.

It may be that the nation cannot much longer afford the luxury of physicians' time being utilized in several of these activities and some of the other less essential paper preparation which is not in the specific realm of diagnosis, prevention, and care of illness.

In the future, let us hope there is more time available to care for the patient instead of paper.

Carroll H. Cobb

Vice-President, KMA



THE INSURANCE PAGE



Ways and Means of Health Insurance Legislation

ON October 8, 1971, the Blue Shield Annual Program Conference convened in Washington, D.C. Several members of the legislative branch of our government addressed the conference. One of these was Congressman Jerry L. Pettis, of California, a member of the Ways and Means Committee of the House of Representatives.

The House Ways and Means Committee has legislative responsibility in many fields. In the field of health, its responsibility is limited to the financing of health care. Any legislation on health care must have the approval of this committee, since it involves such a great expenditure of federal taxes.

Congressman Pettis pointed out that over the next 25 years, it is estimated that Medicare will accumulate a $200 billion deficit with the present rate of expenditures and the revenue available under the present Social Security tax structure. Because of this factor, the Ways and Means Committee is interested in controlling costs. It is elementary that no politician likes to raise taxes, but it is also elementary that it is going to take a lot more taxes to pay this fantastic amount, let alone to cover additional health financing.

There are two different approaches to health insurance legislation; the first is a federally-run and federally-financed health care system, and the second type proposes private insurance with partial financing and supervision by the federal government. Congressman Pettis states that the House Ways and Means Committee is far more likely to approach the health care problem by building onto the best of the present insurance system, using the federal dollar to pay for care for those people who cannot pay for the care themselves and to encourage innovations and reorganization so that the health care system will be organized as efficiently as possible.

It is thought that the committee will take a very sympathetic look at the Administration's proposal that the employer must provide health insurance on a group basis. It would not be surprising if such protection is required of employers. There is also a good possibility that the government will not destroy the present arrangement whereby millions of Americans are now protected against medical care bills by health insurance. Although the private sector of health insurance industry is making great strides to improve the benefit structure in health insurance policies, it is very likely that the government will encourage health maintenance organizations.

Congressman Pettis points out that if national health insurance in some form is to come out of the Ways and Means Committee, in 1972, it will come out after a majority has reached a consensus, but it will be strongly influenced by Chairman Wilbur Mills. It should also be strongly influenced by the medical profession and the health insurance industry, because these are the ones who must make the system work. Health care planning is too important to be left to the social planners who have given us the welfare mess we have today.

It is important that each physician tell his Congressman what he thinks will work and what he thinks will not work. If we are prepared to explain the reasons for this to our Congressman, Congressman Pettis assures us that we will be heard and our views will be respected.

LEWIS DICKINSON, M.D.

A Link in the Chain

auxiliary

WA-KMA Goes to Shakertown



Mrs. Stevens

THE Woman's Auxiliary to KMA is having a Spring Board Meeting and Workshop at Shakertown, near Harrodsburg, on April 4 and 5. The meeting is open to all WA-KMA members, with state board members, county presidents, presidents-elect, committee chairmen, and members-at-large being especially urged to attend. We are anticipating an informative and enjoyable two-day meeting in the quiet, rural atmosphere of restored Shakertown. Workshops will be held on KEMPAC-Legisla tion, AMA-ERF, Health Careers, Membership, Safety, and Nutrition. Gues speakers from AMPAC, KMA, and WA-AMA will highlight the meeting. O the lighter side, there will be time for viewing the Shaker buildings, visitin McDowell House or Fort Harrod, or just sitting and watching Spring come t the Central Kentucky countryside.

A very successful WA-KMA Day in Frankfort was held in January. Joh Stewart, M.D., and Hoyt Gardner, M.D., spoke on the current state and nationa legislation. How to effectively contact and campaign for your legislator wa discussed by Mrs. Hoyt Gardner, Southern Regional Legislative Chairman o WA-AMA. The importance of KEMPAC was stressed at this time. Our KEMPA chairman, Mrs. William Pearson, is carrying the message of political educatio and KEMPAC membership over the State. To date, she has talked to auxiliarie in 11 counties.

Applications are now being received for WA-KMA Health Career Loans. W have $4,575 available in this fund. At the present time, we have seven student in school and seven graduates repaying loans. We feel this program is on of our best means of aiding our husbands, because it not only produces mor health manpower, but also gives tangible evidence to the public of our concer for community health.

All members of the Woman's Auxiliary to KMA are cordially invited to attend the Twenty-second Annual Interim Meeting of the KMA at the Holiday Inn in Somerset on April 13 and 14. A hospitality room for auxiliary members and friends will be open both days. This meeting is a good opportunity to learn about current health care problems which vitally affect us all. There will also be time to enjoy the recreational facilities at nearby Cumberland Lake.

MRS. DAVID B. STEVENS, PRESIDENT
WOMAN'S AUXILIARY TO KMA

PUBLIC HEALTH PAGE

Complications of Smallpox Vaccination†

WILLIAM P. MCELWAIN, M.D., M.P.H.

Commissioner of Health

Commonwealth of Kentucky

AN average of seven persons a year have died from complications to smallpox vaccination in the United States since 1950.[1] These findings and the decreasing significance of smallpox as a world health problem have led some authorities[1, 2] to seriously consider major changes in smallpox vaccination policies.

One recent paper[1] has suggested limiting routine vaccination to selected "high risk" individuals, thus reducing the number of vaccinees. Only medical and para-medical personnel, military recruits, and persons involved in international travel would be vaccinated.

Another approach to reduction of complications would be development of a safer vaccine. In 1968, Kempe *et al*[3] presented a study in which 1,009 eczematous children were safely vaccinated with an attenuated vaccinia strain. If adequate field trails can be conducted to prove both safety and efficacy, such vaccines may eventually be licensed and recommended for general use.[4]

A third approach, and the one of most immediate practical value, concerns steps which could be taken to decrease the frequency of complications with the presently available vaccines and within the framework of the present guidelines for vaccine utilization.[5, 6, 7]

Until the early 1960's, primary vaccination was recommended for infants in the first year of life. It was then believed that postvaccinal encephalitis rarely occurred in this age group.[8] Since then, data from England and Wales[9] and the United States[10, 11] have clearly demonstrated an increased risk of postvaccinal encephalitis and other complications among infants.

Age at primary vaccination in persons over one year of age is a topic not generally discussed in terms of complication rates. The one exception concerns the likelihood of relatively severe complications in adult primary vaccinees.[6] The risk of postvaccinal encephalitis in adult primary vaccinees is one of the principal reasons for continuance of routine infant and childhood immunization in the United States.

A provocative but unsubstantiated finding in the Kentucky study[12] is the high rate of complications in children two to four years of age. Most of these (17 out of 24) were due to accidental infection. This high rate of accidental infection is consistent with the clinical impression of many practicing physicians and suggests that a number of complications might be prevented by delaying primary vaccination of children missed during the second year of life until after their fifth birthday. Unfortunately, due to the commonly used age groupings, virtually no data are available from other studies upon which to confirm or deny this finding.

Despite the common admonition against vaccinating children with eczema or household contacts of patients with eczema, cases and deaths of eczema vaccinatum continue to occur.[10, 11, 12]

Vaccination should be deferred in the presence of eczema, active impetigo, burns, poison ivy, or other transient skin disorders.[5, 6, 7] Generally speaking, vaccination should be performed during a cool season of the year to

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minimize the hazards of such complications. This may sometimes require postponement of vaccination or revaccination until after school has started. Among eczema patients or household contacts of eczema patients, this may require indefinite postponement of vaccination.

Currently Kentucky State Law[13] exempts children from immunization ". . . when, in the written opinion of his attending physician, such immunization would be injurious to the child's health." When such children must be vaccinated for foreign travel to endemic areas or because of exposure to a known or suspect case of smallpox, serious consideration should be given to simultaneous administration of vaccinia immune globulin.

The State Board of Health on November 18, 1971, accepted the recommendations of the Public Health Service Advisory Committee on Immunization Practices and directed the State Health Department to initiate revision of the Infant and School Immunization Laws in order to discontinue the practice of nonselective compulsory smallpox vaccination.

Pending legislative action, the State Health Department urges that compulsory smallpox vaccination be discontinued.

It is important to note, however, that travelers to smallpox endemic countries must continue to be vaccinated.

In conclusion, the extreme unliklihood of any person in the United States being exposed to smallpox should be weighed in the balance when dealing with patients at high risk of vaccine complication. Indefinite deferral of vaccination in some patients, even to the point of their never being vaccinated against smallpox, may be preferable to exposing them to the hazard of a severe complication.

Remarks questioning the value of routine smallpox vaccination must not be construed as applying to all routine immunizing agents. Since January 1, 1968, through January 1, 1972, Kentucky physicians reported three cases of diphtheria (including one fatality), 16 cases of tetanus (including four fatalities), 402 cases of whooping cough (including four fatalities), and 5,289 cases of red measles (including seven fatalities). The need for protection against these almost 100% preventable diseases is as great as it has ever been.

Due to the public health significance of complication to routine immunizing agents (diphtheria, pertussis, tetanus, polio, measles, rubella, and smallpox), the Office of Communicable Diseases of the Kentucky State Department of Health strongly urges all Kentucky physicians to report all significant complications of routine immunization using the same procedures now in use for reporting cases of communicable diseases.

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Continuing Educational Opportunities

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MARCH

15 Postgraduate course, "Hyperlipidemia," by Maurice M. Best, M.D., and S. Philip Greiver, M.D., 6:30 pm, Jewish Hospital, Louisville

15 PANMED television series, "National Health Insurance," KET 11:00 pm EST (10:00 CST)

22 PANMED television series, "Postoperative Care of Child with Congenital Heart Disease," KET 11:00 pm EST (10:00 CST)

22-23 Eighteenth Annual Symposium on Cardiovascular Diseases, Stouffer's Louisville Inn, Louisville

28 Postgraduate course, "Up-to-Date Management of Left to Right Shunts in Congenital Heart Disease," by Kareem B. Minhas, M.D., Professor of Cardiology, Department of Pediatrics, University of Louisville School of Medicine, 7:00 to 9:00 pm, Children's Hospital Amphitheater, Louisville

29 PANMED television series, "Preoperative Care of Child with Tetrology of Fallot," KET 11:00 pm EST (10:00 CST)

APRIL

5 PANMED television series, "Care of Adult with Coronary Artery Surgery," KET 11:00 pm EST (10:00 CST)

6 Annual Meeting, Kentucky Industrial Medical Association, 2:00 pm, Ford Motor Company Kentucky Truck Plant, Louisville

6 Seventeenth Annual Clinical Conference, "Hypertension," Lexington Clinic, 1221 South Broadway, Lexington

6-8 Spring meeting, Kentucky Chapter, American College of Surgeons, Ramada Imperial Inn, Lexington

8 Symposium on Current Pharmacology and Therapeutics of Cardiac Disease, Department of Pharmacology and Office of Continuing Education, University of Louisville, 8:30 am, Health Sciences Center Auditorium, registration fee $25, six prescribed credit hours by the Kentucky Chapter, American Academy of Family Physicians

12 PANMED television series, "Differential Diagnosis and Provisional Treatment of Myofacial Pain," KET 11:00 pm EST (10:00 CST)

13 Spring meeting, Kentucky Chapter, American College of Radiology, 6 pm, Ramada Imperial Inn, Lexington

16-22 Postgraduate program, "Annual Family Medicine Review," University of Kentucky. For further information write: Frank R. Lemon, M.D., Associate Dean for Continuing Education, University of Kentucky College of Medicine, Lexington, Kentucky 40506

19 Postgraduate course, "Contraceptive Problems," by Marvin Yussman, M.D., 6:30 pm, Jewish Hospital, Louisville

19 PANMED television series, "Space Analysis of the Dentition and Space Management," KET 11:00 pm EST (10:00 CST)

22 Ninth Symposium on Oral Cancer, Department of Surgery, University of Louisville School of Medicine and the School of Dentistry, Health Sciences Center Auditorium

25 Postgraduate course, "Development of Disabilities in Children," by Bernard Weisskopf, M.D., Associate Professor, Department of Pediatrics, Mental Retardation and the Handicapped Child, Child Evaluation Center, 7:00 to 9:00 pm, Children's Hospital Amphitheater, Louisville

27 Eighth Annual Rheumatic Disease Symposium, University of Louisville School of Medicine and Kentucky Chapter of the Arthritis Foundation, Amphitheater of Health Sciences Center, Louisville

IN SURROUNDING STATES

MARCH

13-15 American College of Surgeons sectional meeting, Philadelphia

13-16 Postgraduate course, "Maxillofacial Trauma," Department of Otolaryngology and Maxillofacial Surgery, University of Cincinnati Medical Center, Cincinnati, Ohio. For further information write: Miss Debby Adkins, Office of CONMED, Room 114, College of Medicine, University of Cincinnati, Cincinnati, Ohio 45219

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 37-year-old divorced white gravida 2, para 1 was seen in the emergency room at 3:45 pm on 5/7/70 complaining of abdominal swelling. She said she couldn't be pregnant even though her LMP was 3 months ago. Oral temperature was 98°, and blood pressure 120/80. Examination revealed an enlarged mass compatable with 4-4-1/2 months pregnant uterus. A UCG pregnancy test was ordered. The patient was told to call for the report in the morning. She was a known alcoholic.

She was next seen on 5/12/70, dead on arrival at a different hospital. An autopsy was obtained.

The final diagnosis was abruptio placenta with uteroplacental apoplexy, with diffuse hemorrhage throughout the uterine wall extending into the retroperitoneal space and into the abdominal cavity (approximately 400cc)—acute suppurative myometritis with bacterial colonization, acute pelvic peritonitis, plus hemorrhagic necrosis of the kidneys and bronze pigmentation of the skin of the body (etiology undetermined) on a histologic basis.

The possibility of a certain drug or chemical perhaps used to produce abortion couldn't be excluded. The severe, overwhelming infection probably represented a sequela to induced abortion.

The cause of death was the overwhelming infection with acute nephrosis.

Summary

The Maternal Mortality Committee felt that this death should be classified as direct obstetric with preventable factors. The cause of death was likely soap embolism resulting in the bronze pigmentation of her skin. Clostridia infection could not be ruled out.

The preventable factors were entirely due to patient responsibility. Had she not had an apparent illegally induced abortion, this death would not have occurred. There is very little that can be offered in the way of discussion of treatment in this case, since the patient arrived at the hospital dead. However, usually patients with this type of severe illness are very difficult to manage and, in spite of very intensive work by the physicians, frequently die.

The best treatment is prevention by convincing the patient that an abortion done in unsterile surroundings by inexperienced people is not the best end for any pregnancy.

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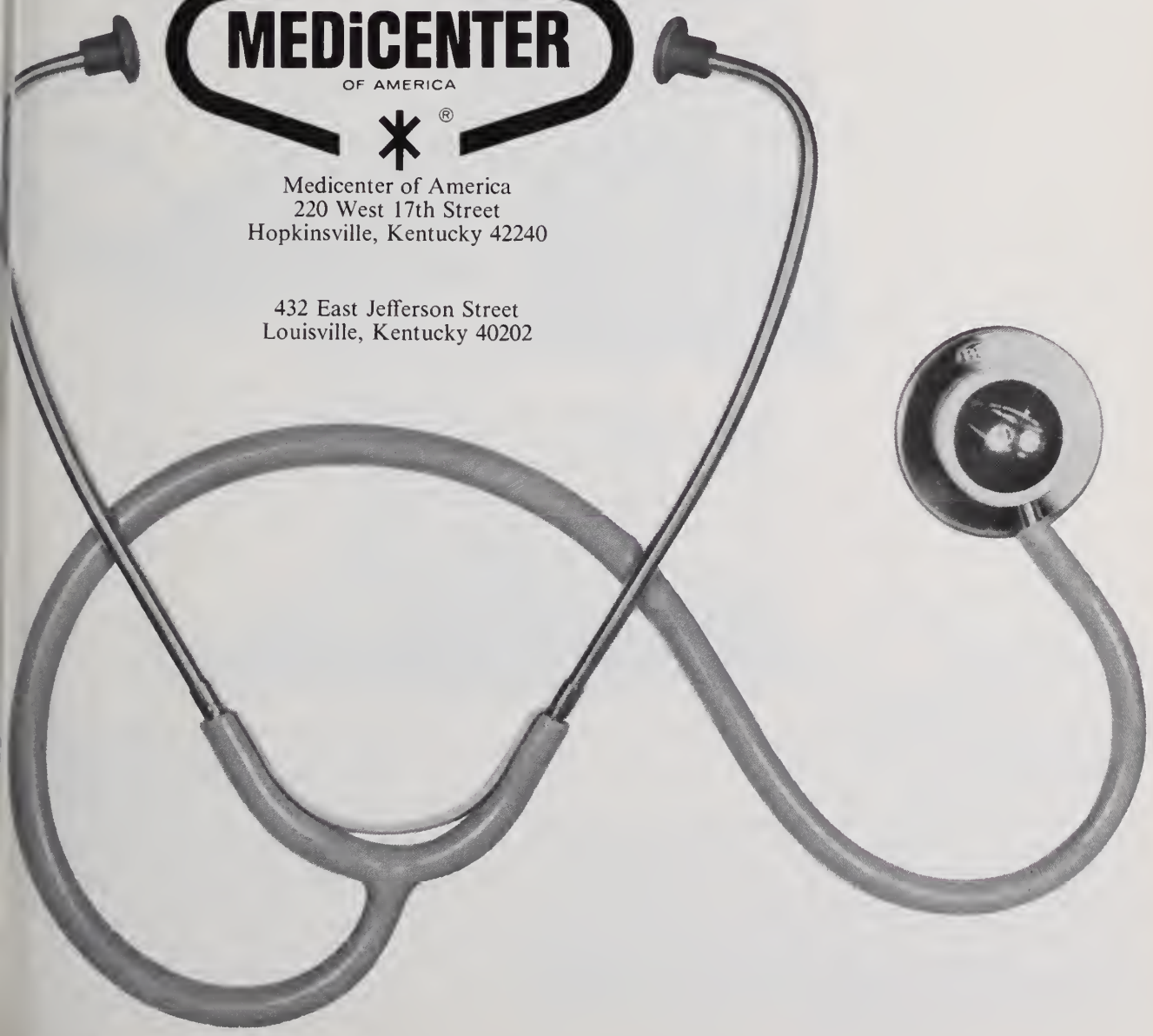
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Contraindications: History of hypersensitivity to thiabendazole.
Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.
Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction, patients should be carefully monitored.
Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live Ascaris in the mouth and nose. Hypersensitivity reactions include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.
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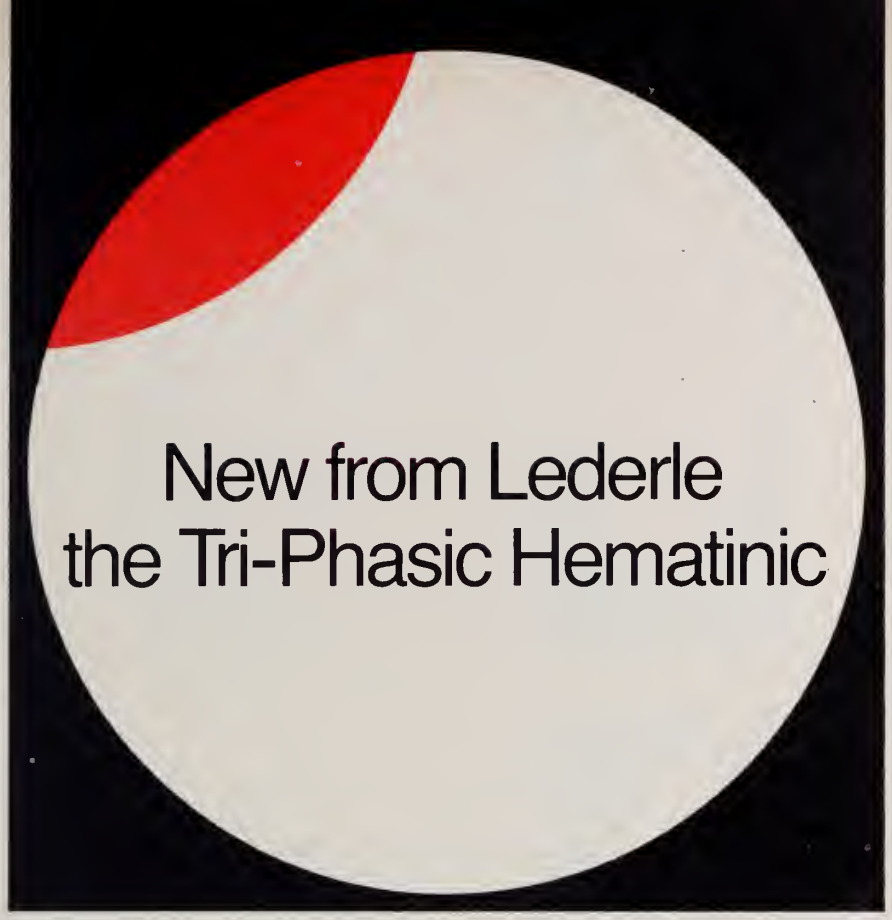
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Free sulfonamide blood levels should be measured in patients receiving sulfonamides for serious infections since there may be wide variations with identical doses; 20 mg/100 ml should be maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Hypersensitivity to sulfonamides, infants less than 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis), pregnancy at term, and during the nursing period.

Warnings: Safety of sulfonamides in *pregnancy* has not been established. Sulfonamides will not eradicate group A streptococci. Deaths associated with sulfonamide administration have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalyses with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution when impaired renal or hepatic function, severe allergy or bronchial asthma is present. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis (frequently a dose-related reaction) may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia, methemoglobinemia. *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia, allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis, stomatitis. *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred with sulfonamide therapy. Sulfonamides bear certain chemical similarities to some goitrogens, diuretics and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents.

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*Koch-Weser, J., *et al.: Arch. Intern. Med.*, *128* 399, 1971.

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Contraindications: Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.

Warnings: When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexigenic effect; discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence: Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage In Pregnancy: The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage In Children: Not recommended for use in children under 12 years of age.

Precautions: In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorexic agent and a restrictive dietary regimen.

Adverse Reactions: Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration: The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

Overdosage: Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

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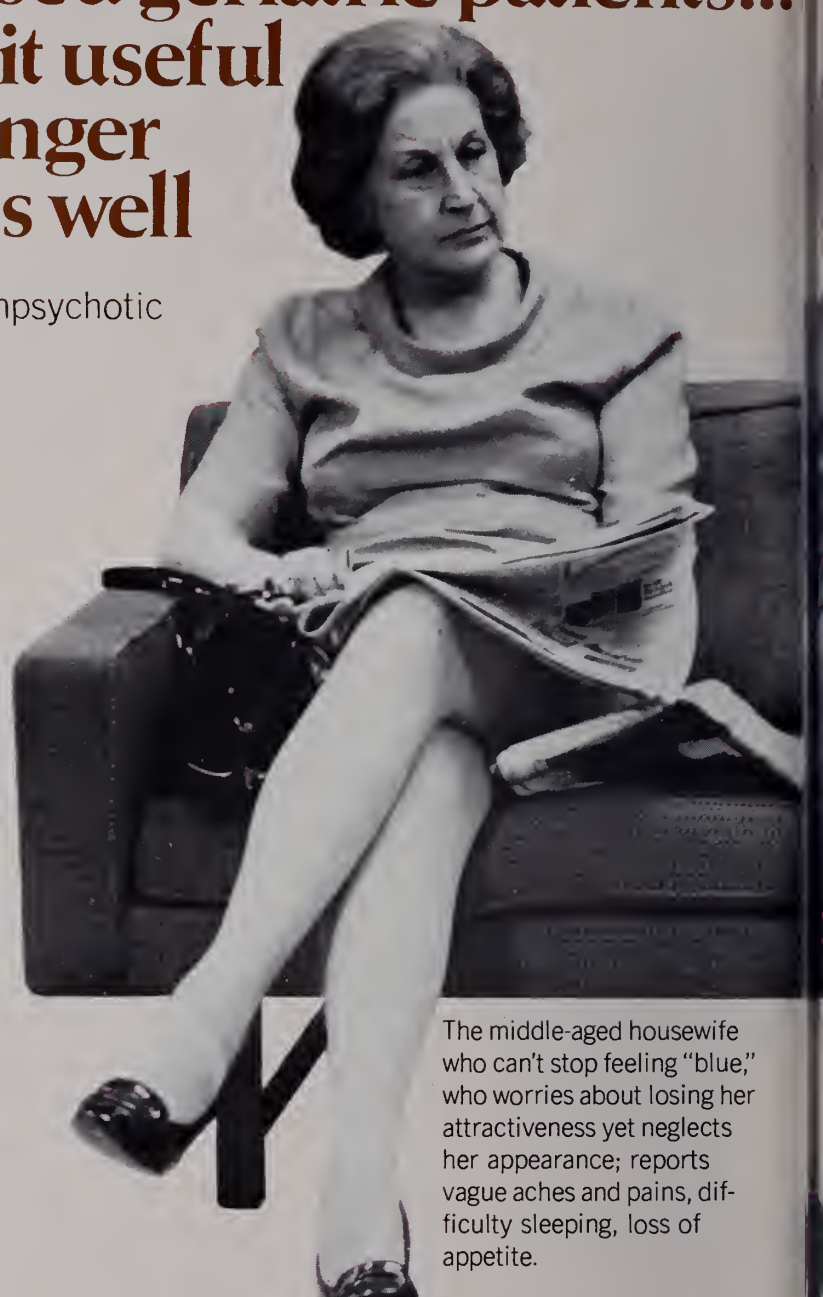


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INDICATIONS: Useful in the management of depression, both acute (reactive) and chronic; particularly useful in the less severe depressions and where the depression is accompanied by anxiety, insomnia, agitation, or rumination; also useful for management of depression and associated anxiety accompanying or related to organic illnesses.

CONTRAINDICATIONS: Benactyzine hydrochloride: Glaucoma and previous allergic or idiosyncratic reactions to benactyzine hydrochloride or related compounds. **Meprobamate:** Acute intermittent porphyria and allergic or idiosyncratic reactions to meprobamate or related compounds such as carisoprodol, mebutamate, tybamate, carbromal.

WARNINGS: The following information on meprobamate pertains to 'Deprol' (meprobamate + benactyzine hydrochloride): **Meprobamate:** *Drug Dependence:* Physical and psychological dependence and abuse have occurred. Chronic intoxication, from prolonged use and usually greater than recommended doses, leads to ataxia, slurred speech, vertigo. Carefully supervise dose and amounts prescribed, and avoid prolonged use, especially in alcoholics and addiction-prone persons. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis; rarely convulsive seizures, more likely in persons with CNS damage or pre-existent or latent convulsive disorders). Therefore, reduce dosage gradually (1-2 weeks) or substitute a short-acting barbiturate, then gradually withdraw. *Potentially Hazardous Tasks:* Driv a motor vehicle or operating machinery. *Additive Effects:* Possible a tive effects between meprobamate, alcohol, and other CNS depressa or psychotropic drugs. *Pregnancy and Lactation:* Safe use not establish weigh potential benefits against potential hazards in pregnancy, nurs mothers, or women of childbearing potential. Animal data at five tin the maximum recommended human dose show reduction in litter s due to resorption. Meprobamate appears in umbilical cord blood at near maternal plasma levels, and in breast milk at levels 2-4 times tl of maternal plasma. *Children Under Six:* Drug not recommended.

PRECAUTIONS: Meprobamate: To avoid oversedation, use lowest ef tive dose, particularly in elderly and/or debilitated patients. Consider p sibility of suicide attempts; dispense least amount of drug feasible at a one time. To avoid excess accumulation, use caution in patients with c promised liver or kidney function. Meprobamate may precipitate seizu in epileptics.

ADVERSE REACTIONS: Nausea, dry mouth, other g.i. symptoms; s cope; one case each of severe nervousness and loss of power of conc tration. The following side effects, which have occurred after administrati of its components alone, have either occurred or might occur when t combination is taken. **Benactyzine hydrochloride:** Benactyzine hyc chloride alone, particularly in high dosage, may produce dizziness, thoug blocking, a sense of depersonalization, aggravation of anxiety, or dis

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ıce of sleep patterns, and a subjective feeling of muscle relaxation. ere may also be anticholinergic effects such as blurred vision, dryness mouth, or failure of visual accommodation. Other reported side effects ve included gastric distress, allergic response, ataxia, and euphoria. **probamate**: *Central Nervous System:* Drowsiness, ataxia, dizziness, rred speech, headache, vertigo, weakness, paresthesias, impairment of ual accommodation, euphoria, overstimulation, paradoxical excite- nt, fast EEG activity. *Gastrointestinal:* Nausea, vomiting, diarrhea. *Car- vascular:* Palpitations, tachycardia, various forms of arrhythmia, tran- nt ECG changes, syncope; also, hypotensive crises (including one fatal se). *Allergic or Idiosyncratic:* Usually after 1-4 doses. Milder reactions: hy, urticarial, or erythematous maculopapular rash (generalized or nfined to groin). Others: leukopenia, acute nonthrombocytopenic pur- ra, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopa- , fever, fixed drug eruption with cross reaction to carisoprodol, and ss sensitivity between meprobamate/mebutamate and meprobamate/ rbromal. More severe, rare hypersensitivity: hyperpyrexia, chills, angio- urotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema ltiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson ndrome; bullous dermatitis (one fatal case after meprobamate plus ednisolone). Stop drug, treat symptomatically (e.g., possible use of inephrine, antihistamines, and in severe cases corticosteroids). *Hema- logic:* Agranulocytosis and aplastic anemia (rarely fatal), but no causal relationship established. Rarely, thrombocytopenic purpura. *Other:* Exacerbation of porphyric symptoms.

USUAL ADULT DOSAGE: One tablet three or four times daily, which may be increased gradually to six tablets daily and gradually reduced to maintenance levels upon establishment of relief. Doses above six tablets daily are not recommended.

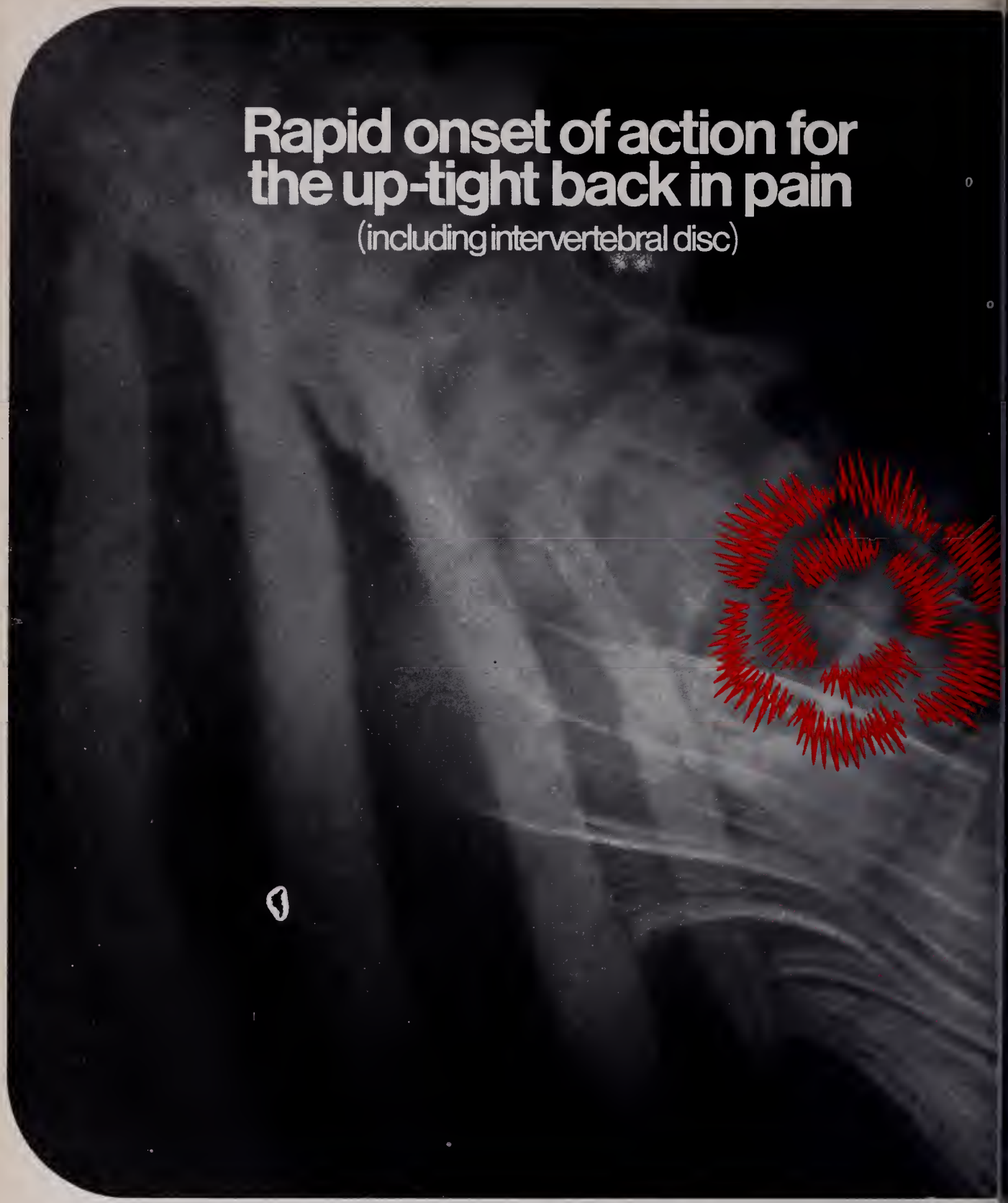
OVERDOSAGE: Overdosage of 'Deprol' (meprobamate + benactyzine hydrochloride) has not differed substantially from meprobamate overdosage: **Meprobamate**: Suicidal attempts with meprobamate, alone or with alcohol or other CNS depressants or psychotropic drugs, have produced drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse, and death. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Meprobamate is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption. REV. 10/71

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Precautions: To avoid excess accumulation, use caution in patients with compromised liver or kidney function.
Adverse Reactions: *Central Nervous System:* Drowsiness, dizziness, vertigo, ataxia, tremor, agitation, irritability, headache, depressive reactions, syncope, insomnia. *Allergic or Idiosyncratic:* Usually seen after 1-4 doses in patients not previously exposed, e.g., rash, erythema multiforme, pruritus, eosinophilia, fixed drug

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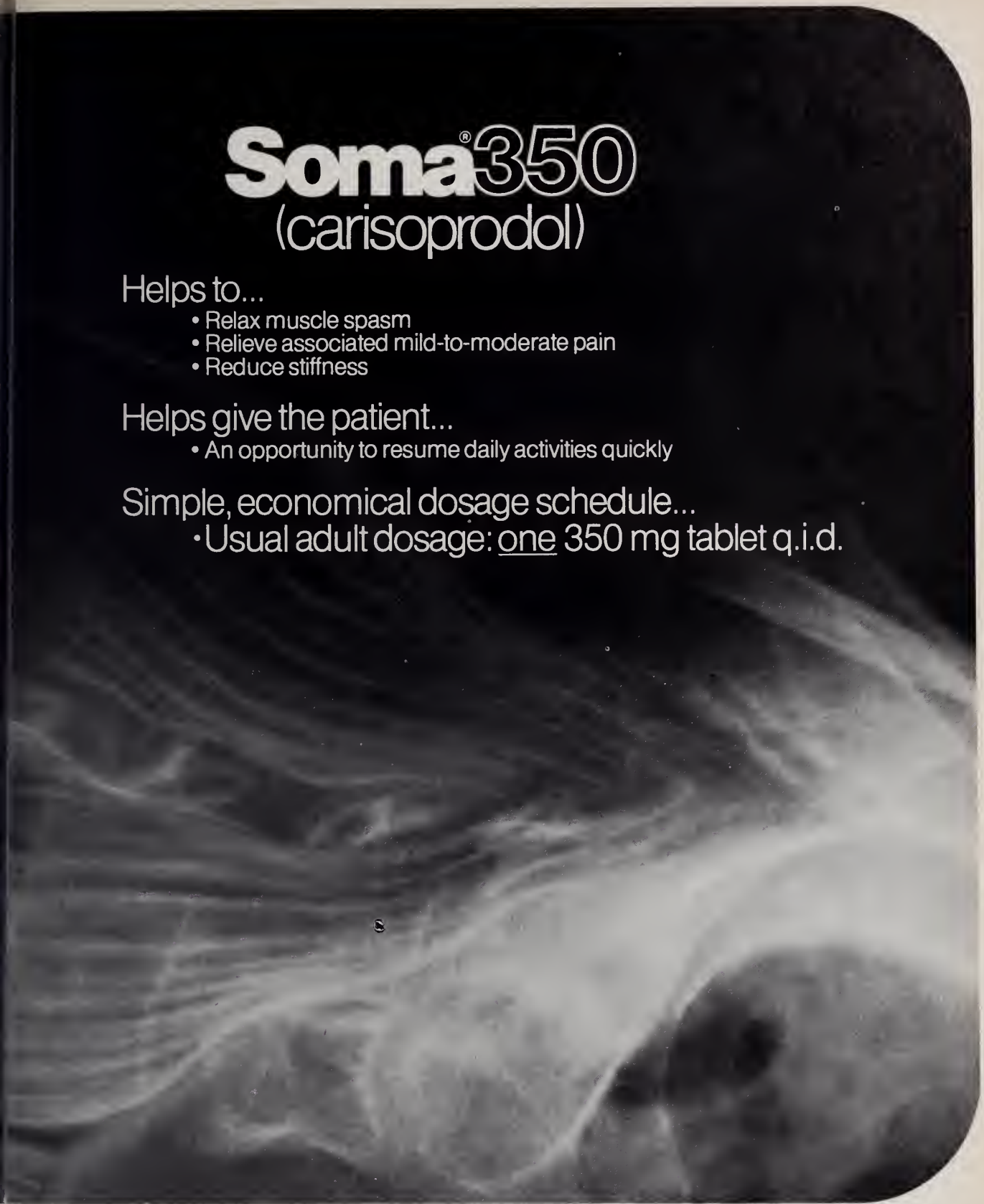
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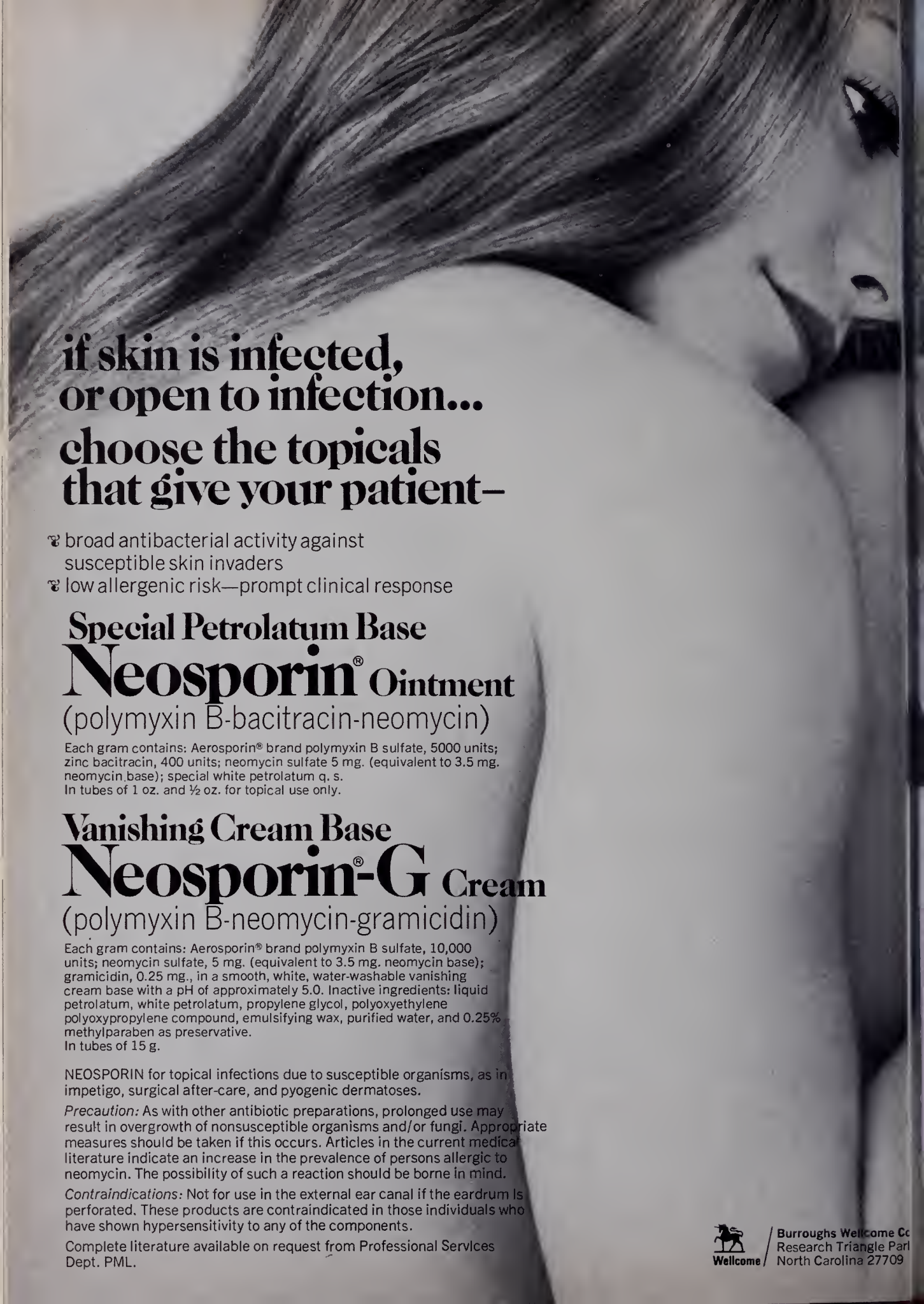


uption with cross reaction to meprobamate. More severe manistations: asthma, fever, weakness, dizziness, angioneurotic dema, smarting eyes, hypotension, anaphylactoid shock. Stop ug, treat symptomatically (e.g., possible use of epinephrine, ntihistamines, and in severe cases corticosteroids). *Cardiovasular:* Tachycardia, postural hypotension, facial flushing. *Gastrointestinal:* Nausea, vomiting, hiccup, epigastric distress. *Hematologic:* Leukopenia and pancytopenia (on carisoprodol plus her drugs).

sual Adult Dosage: One 350 mg tablet three times daily and at edtime.

verdosage: Has produced stupor, coma, shock, respiratory depression, and, very rarely, death. Overdosage of carisoprodol plus alcohol or other CNS depressants or psychotropic drugs can be additive. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Carisoprodol is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully with related drug meprobamate. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption. REV. 10/71

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NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

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Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. *Contraindications:* Hypersensitivity to any of the components. *Precautions:* As with all phenacetin-containing products, excessive or prolonged use should be avoided. *Side effects:* Side effects are uncommon, although nausea, constipation and drowsiness may occur. *Dosage:* Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

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prescribing information appears on next page

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Dimetane® (brompheniramine maleate), 12 mg., phenylephrine HCl, 15 mg; phenylpropanolamine HCl, 15 mg

Dimetapp Extentabs®

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WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.
PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.
ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.
HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

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Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia

Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lbs. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made

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The JOURNAL of the
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Status Asthmaticus†

Martin I. Gold, M.D.*

Baltimore, Maryland

Status asthmaticus is discussed from pulmonary physiological and clinical viewpoints within the framework of modern medicine. The role of IPPB, chest physiotherapy, and pharmaceuticals is examined; the concept that such patients should not die is proposed.

THE incidence of bronchial asthma in the United States is estimated to be 2% of the population, and the average annual death rate is approximately 1.5 per 1,000 fatalities.[1] There has been an apparent decline in this mortality rate; but about 10% of asthmatics who die, do so in status asthmaticus, and this incidence is increasing, according to Bates and Christie.[2]

It is now generally agreed that pulmonary emphysema may be realistically defined in morphological terms only and that chronic bronchitis is best understood by means of clinical criteria. Asthma, as differentiated from these two other variants of chronic obstructive lung disease, involves a considerable "allergic" component; but the clinical distinction between emphysema, bronchitis, and asthma remains nebulous.

Asthma should be thought of as a lung disease characterized by a rapid return toward normal function, with periods of remission; e.g., when maximal treatment is imposed. It does not involve a productive cough as does chronic bronchitis. The voluminous x-ray appearance of the lungs during an acute attack represents reversible hyperinflation in contrast to the irreversible radiolucency of emphysema. In true asthma, attacks of wheezing date from childhood or early adult life. Chronic infective asthma is believed to be a variant of chronic bronchitis, but the attacks of infection are characterized by severe bronchospasm. This usually begins after the age of 40.

One may classify five stages of asthma according to the state of the lungs.[2]

Stage I: Here the lungs are normal apart from the propensity to worsen. No pulmonary function test is abnormal.

Stage II: This is the stage of partial remission; and the patient is asymptomatic, but the airway resistance of larger bronchi has increased. Although V/Q ratio and gas distribution disturbances occur, the forced expiratory volume, functional residual capacity, and blood gases are probably normal.

Stage III: This is the stage of moderate bronchospasm. Rhonchi are present and atelectasis is beginning as is alteration in lung recoil. All tests of pulmonary function are abnormal, including a decrease in the arterial oxygen tension (Pa_{O2}).

Stage IV: Is that of severe bronchospasm. There is obstruction in bronchi and bronchioles (mucus plugs begin here). Atelectasis worsens. The pulmonary mechanics, distribution, V/Q ratio abnormalities, and the low arterial oxygen

†*Presented at the morning general session of the 1971 KMA Annual Meeting, September 21, Louisville*

**Professor of Anesthesiology, Division of Respiratory Care, Department of Anesthesiology, University of Maryland School of Medicine, Baltimore, Maryland 21210*

tension deteriorate; but the arterial carbon dioxide tension is normal or even low.

Stage V: The stage of status asthmaticus. Extensive mucus plugs, atelectasis, and fatigue characterize this state which is unrelieved by usual therapy, and ultimately acidosis with carbon dioxide retention develops. This is an ominous sign and must be corrected or death will result.

Status asthmaticus, therefore, may be defined as the final stage in the disease, asthma, characterized by severe obstruction of bronchi and bronchioles with highly abnormal pulmonary mechanics, distribution, and perfusion characteristics. The usual drug therapy, including epinephrine, aminophylline, isoproterenol, and even steroids, has not been successful. The hypoxemia and fatigue lead to lactic acidosis, ventilatory failure with carbon dioxide retention, a dangerous accumulation of hydrogen-ion, and sudden cardiac arrest.

Perhaps the two most important advances in the treatment of status asthmaticus are: 1) ability to monitor the arterial blood gases, and 2) mechanical ventilation. One should realize that neither are cures; they are time-buyers. There are no new and exciting drugs for the treatment of status asthmaticus. There are some new physiologic facts and the indoctrination of the therapeutic philosophy that with few exceptions there is no excuse for any asthmatic to die in status asthmaticus.

Pathology

There is clinical confusion between asthma and chronic bronchitis; on the other hand, there are clear cut morphological descriptions of asthma and bronchitis, both of which differ fundamentally, particularly in reference to the presence of emphysema. If one considers only those patients dying in status asthmaticus, a clear picture emerges. The lungs are voluminous and retain air after removal from the chest. Areas of atelectasis are frequently demonstrable. Bronchi and bronchioles are occluded by characteristic tenacious mucous plugs containing cellular spirals composed of eosinophils and detached bronchiolar epithelium with Charcot-Leyden crystals. There is no real evidence of bronchial muscle spasm, the fatal obstruction being due to the mucus casts. There is edema, a thick basement membrane, but no hypertrophy of mucous glands (in contrast to that of chronic bronchitis). The muscle layers of bronchioles may be hypertrophied. The lungs are not victim of destructive emphysema, despite gross hyperinflation; there is no cor pulmonale.

Physiology

The known pulmonary physiologic changes occurring during an asthmatic attack may be summarized:[3-11]

1. Vital capacity and timed vital capacity decrease.
2. Residual volume and functional residual capacity increase.
3. Frictional resistance increases; compliance decreases.
4. Blood gas changes occur; a gradual decline in Pa_{O_2} corresponding primarily to significant ventilation/perfusion abnormalities occurs; the patient may attempt to compensate with hyperpnea, resulting in an initial decrease in Pa_{CO_2} with an eventual increase in Pa_{CO_2}.
5. Dead space to tidal volume ratio (VD:VT) increases.
6. Oxygen uptake increases, as do cardiac output and carbon dioxide production. All this is probably in relation to increased work of breathing, but arterial to venous differences remain at the same level.
7. Pulmonary arterial pressure increases.
8. Oxygen diffusion capacity with exercise decreases.
9. Regional abnormalities of pulmonary blood flow exist.

Treatment

1. Increase in the inhalation concentration of oxygen (F_{IO_2}) above air's 21%. An immediate arterial blood gas analysis is necessary, and the intial F_{IO_2} may range from 50% to 100% oxygen.
2. Increase in alveolar ventilation for the prevention and the treatment of carbon dioxide retention by increasing tidal and minute volumes. This is most effectively achieved by means of a mechanical ventilator and must be done with the guidance of blood gas analysis. Volume guaranteed ventilators, in contrast to pressure guaranteed ventilators, are presently

in vogue. However, the essence of success with use of a ventilator involves less of the type of the machine and more of knowledge and the presence of a Respiratory Care Area with nurses and inhalation therapists.

3. Adequate humidification of inhaled gas. This is necessary to liquify thick mucous and to generate the flow of tracheobronchial secretions within the framework of a functional ciliary mechanism.

4. Tracheal intubation. This becomes the "machine-patient interface" and significantly improves the consistency for the provision of oxygen, humidification, and adequate alveolar ventilation. The endotracheal tube also provides access for suction of secretions. Since many patients in status asthmaticus placed on a ventilator fall asleep (they no longer have to work to breath or they might have to receive sedatives, etc.), their cough reflex is depressed. Suctioning is, therefore, a vital tool in clearing the airways. Turning the patient on his side and the application of chest physiotherapy are also necessary.

5. Acidosis is frequently present and must be treated to improve myocardial function and to allow beta adrenergic stimulating catecholamines to work. An infusion of intravenous sodium bicarbonate at this time may be in order, and the arterial pH should be measured.

6. Drugs may also be utilized: these include aerosolized bronchodilators such as isoproterenol, racemic epinephrine, and isoetherine; intravenous aminophylline; steriods in rather large doses (e.g., hydrocortisone 200 to 1,000 mg); and antibiotics which are effective against bacteria cultured or smeared from the tracheobronchial tree.

7. "Heroic" measures for asthmatics who do not respond to such therapy include general anesthesia with diethyl ether or halothane. Both agents are associated with an increase in bronchial caliber, but ether is more irritating, stimulates more secretions initially, and the induction of anesthesia takes longer. Halothane has enjoyed a great deal of success here and abroad in this respect.[13] General anesthesia for the moribund patient in status asthmaticus is associated with two general complications: a) worsening bronchospasm which may or may not be temporary, and b) cardiac arrhythmias.

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Some Pitfalls in the Diagnosis and Treatment of Skin Diseases†

Sture A. M. Johnson, M.D.*
Madison, Wisconsin

When a skin condition continues or becomes worse after two weeks of treatment, it is time to reconsider your diagnosis, to change the vehicle, to see whether additives are present, to change the method of application and dosage of the medication, and to realize that iatrogenic conditions may have taken place.

WHEN I decided to discuss with you, "Some Pitfalls in the Diagnosis and Treatment of Skin Diseases," I was prompted by observations that I have made in seeing and treating patients who have had previous therapy.

There is a feeling that annular lesions are most likely due to a fungus; and possibly because of this, patients receive expensive oral as well as topical therapy for a tinea which does not exist. Annular lesions occur in sarcoid disease, pityriasis rosea, syphilis, psoriasis, urticaria, superficial neoplasms, and a number of other conditions. Certainly, if an annular lesion which is being treated with fungicides does not respond in two weeks one should consider another diagnosis and change in medications.

A similar misunderstanding occurs in the diagnosis of lesions of the feet. Here patients are treated for a fungus disease when the problem is due to a contact dermatitis from shoes having rubber, chrome, and dyes or from psoriasis, infections, and dyshidrosis.

One can make remarks regarding the hasty conclusion that many make when they feel that eruptions of the hands are due to detergents or soaps. Secondary syphilis, psoriasis, bacterids, and abnormalities in keratinization are among the diseases which involve the hand.

We often see patients who have had good treatment for dandruff, but do not have the disease. Psoriasis, pulling of the hair (trichotillomania), or a contact dermatitis may be the condition which has been overlooked.

Nerves rarely play a primary role in causing skin lesions; however, the lack of sleep, frequent scratching, and failure to get better will get on anybody's nerves.

I wish to call your attention to the fact that butterfly lesions on the face are not necessarily due to discoid or systemic lupus erythematosus and that lesions of the ear are rarely due to a fungus. On the basis of statistical considerations, to assume that annular lesions are due to a fungus is more likely to be wrong than right. This also applies to problems of the scalp, face, ears, hands, or feet.

Some diseases, such as psoriasis, may manifest themselves in many ways. For this reason, I have often stated, "Know psoriasis in all its manifestations and everything in dermatology shall come unto you." When there are lesions of the skin that are characteristic of psoriasis, there is a good possibility that all the other skin lesions which are present are also due to psoriasis. I need only to call your attention to the fact that psoriasis may involve the scalp, nails, genitalia, as well as other areas and may now and then only present itself as a single lesion. When in doubt, a biopsy should give you the answer, but remember that most general pathologists are not dermatopathologists.

There are many types of vehicles, and the proper selection becomes important. Lotions, which often contain zinc oxide, talcum, and starch, will dry weeping and exudative lesions. They do mat the hair and can form thick accumulations of powder mixed with serum, bacteria, and cells. Oddly, at times, a drying lotion

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will work better on a dry skin than a greasy one. This most likely is due to a sweat retention syndrome that may be present.

Another vehicle is the ointment variety which is usually petrolatum. This is lubricating, but may cause folliculitis in hairy places and often a burning sensation of the skin due to sweat retention.

A very good emollient is calamine liniment, which, as you know, has 50% olive oil. I do feel that emollients are not used frequently enough. They cause some dryness because of the powders they contain, but at the same time oiliness due to olive oil. The so-called cream bases have very little emollient properties, but have an advantage in that they do not cause a folliculitis and they can be readily washed off. Some creams contain compounds to stabilize them, and such compounds may be the cause of a persistent dermatitis.

For several years intralesional injections of steroids have been used in the treatment of severe acne conglobata, psoriasis, lichen simplex chronicus, and other conditions. These injections may cause atrophy which can last for weeks or months; and for this reason, the interval between injections should be several weeks.

Other vehicles are plasters, like the Duke Laboratory 40% salicylic acid plaster, which is used for the removal of callouses, corns, and warts. Generally plasters are not left on long enough. They should remain four to five days before removal. Reapplication should remain for a similar time.

Recently tapes with medications like Cordran have become available. These are particularly benficial on small or flat surfaces like the face or nose where they remain adherent for hours. On the back or areas of skin where there is movement of the skin or much perspiration, they do not stay on long enough to be helpful.

Wet compresses have long been a standby in the treatment of skin conditions and generally they are not used frequently enough. They should be open and not covered with occlusive materials, cool, wet, and changed frequently.

Lastly, there are powders which have a very limited use. They make the hair mat together and cause a plaster covering composed of serum, purulent material, and powder.

I should like to make a few comments about the occlusive dressing which is used with topical steroids. Do not apply them to vesicular or weeping lesions. The dressings should be left on for 12-18 hours out of each day. Longer periods will cause infection, folliculitis, and atrophy of the skin. Some patients may develop a sensitivity to the dressing itself or photosensitivity where the dressing has been used. Since occlusive dressings enhance the absorption of steroids, one should bear in mind that the new high potency steroid preparations will give higher blood levels with the greater possibility of systemic effect. The skin surfaces vary in their ability to absorb steroids. For instance, the skin of the scrotum absorbs readily, while that of the forehead does not. We have found that not all steroid containing creams or ointments work under occlusion. Fluoronated steroids such as the triamcinolones seem to be more efficient and give a longer period of relief after removal. Remember that cream bases are usually used in the summertime and ointments in the winter.

Absorption of topically applied steroids are known to increase with the size of the area treated, in the presence of open or damaged skin, and the length of period of application. There is a strong feeling that topically applied steroids should be used with caution in the youthful patient, because of the problem of absorption and systemic effect.

Now I should like to make some remarks regarding dosage and use of certain medications. By and large, the steroids are not used in large enough doses in acute contact dermatitis or atopic eczema. The patient should be given initially 50-60 mg daily for a few days, and then the medication should be dropped off rapidly over seven to ten days. This is much more helpful than giving small doses for longer periods of time. Under any regimen, the rebound effect of steroid therapy must be anticipated, particularly in the patient with eczema. The patient may have an excellent response to the treatment and may relapse with the condition being worse than it was initially.

The antihistamines which have been so helpful in the relief of pruritus and urticaria are often not used properly. Then antihistamines

should be given in doses sufficiently large to control urticaria and then tapered off over a period of 14 days or so. Too frequently, the PRN type of antihistamine treatment is given.

There are times when toxic levels of a medication might be the only way to get results. Vitamin A, a medication which effects keratinization, is an example. Where Vitamin A seems to be indicated, we give 250,000 units daily for two weeks, and 200,000 units for another two weeks. By the end of three weeks, we would expect marked improvement if the Vitamin A is going to be helpful. Then a maintenance dosage of 50-100,000 units is used. Remember that Vitamin A has several toxic reactions and these may include headaches and mental confusion.

There are several erythromycins on the market. The estolate salt of erythromycin seems to be the best for oral and topical therapy. Since the birth control pill has found a definite place in the treatment of acne vulgaris in the female, there are a few comments that I would like to make. The pill may have to be given for two to three months before help is noted; and after a year, the pill may no longer be helpful. There is a strong feeling that the maxi dose of the pill should be given and not the mini dose.

Though all the antibiotics and the sulfons have been used in the oral treatment of acne vulgaris, the tetracyclines still hold their place. No doubt you have read about 5FU (Efudex or Fluoroplex) in a solution or cream which is used in the treatment of precancerous and cancerous skin lesions. The medication does not destroy seborrheic keratoses and many other benign new growths. If you do use it, read the brochure carefully; because when it works, the local reaction may be frightening to you and the patient.

Lastly, a few comments about Selsun which is used in the treatment of tinea versicolor. Too often I find that patients are using Selsun in the same way they would use it for the treatment of seborrhea. Selsun when used for treatment of tinea versicolor should be left on for 8-12 hours, washed off, and repeated in 12 hours. This should be done over a period of several days.

Every physician should start to suspect medicaments and constituents of the vehicle if the patient, after an initial improvement, becomes worse or when the patient has had previous therapy and does not improve with the present regimen. This may be due to the methyl, ethyl, or propyl parabens, or ethylene diamine hydrochloride (Mycolog) which are used particularly in lotions and creams to preserve them. Hytone and Valisone cream and most ointments are free from preservatives. Neomycin, which is used frequently with steroid preparations, may cause an allergic reaction so that the patient does not improve.

If antibiotics are to be used topically with the steroid, I would suggest mixing erythromycin estolate ointment with the steroid that you prefer. Do not forget the possibility of a cross sensitivity reaction being present. Ethylene diamine hydrochloride, for instance, may react with aminophyllin, Pyribenzamine, Antistin, or Histostab. Photocontact reactions may occur in those compounds and cleansers like soaps which contain tars, hexachlorophene, halogenated salicylanilides, carbonilanides, and phenols. Phototoxic reactions may be noted where patients have received tetracyclines, sulfons, Griseofulvin, phenothiazines, chlorothiazides, and furocoumarins.

Ultraviolet light or sunshine is not a panacea. They may cause, for instance, phototoxic reactions in patients who have received orally demethychlortetracycline or sulfons, or a photocontact dermatitis in patients who are using tars or various antibacterial chemicals that are present in some soaps and topical preparations. In some instances, ultraviolet light or sunshine may cause a Koebner's phenomenon and make lichen planus or psoriasis worse. At times, a herpes simplex infection may be brought on by ultraviolet light or sunshine. In patients with various immunological type of reactions like lupus erythematosus or solar urticaria, a flare may occur with actinic exposure. The same may be true in persons who have genetic problems like xeroderma pigmentosum or biochemical, metabolic, nutritional, hormonal, and eczymatic problems like pellagra or porphyria.

The medicated bath is useful in patients with a generalized eruption. Aveeno which is made of oatmeal does not lubricate, though it feels oily due to the mucinlagenous character of it. Sodium bicarbonate causes extreme dryness and should never be used in the elderly or those who have dry skin. Commonly we find patients

with pruritus or dry skin who add bubble bath or detergents to the tub of water. This habit is not limited to children. Too hot water and frequent bathing, particularly in the winter, may in themselves cause xerosis and pruritus. Any patient who is receiving a bath as a part of a therapeutic regimen should have applied immediately after bathing emollients or ointments to lock in the moisture.

Diets have been emphasized in the treatment of various skin conditions. By and large, the lack of certain foods and their vitamins and minerals may cause more problems than the food itself. I have in mind the patient who states that citrus fruits are too acid; and for this reason, may have a diet which is low in Vitamin C. In psoriasis, various diets have been tried with few, if any, good results. Very recently a low tryptophan diet which was made up basically of boiled turkey meat was advocated. Subsequently, it was shown that many meats were as low in tryptophan as turkey. Other diets which have been suggested are low in taurine, fat, and bovine protein. In acne vulgaris, there is some evidence to indicate that chocolate and cocoa do not cause or aggravate the condition. Notwithstanding, I still suggest that the acne patient should not have chocolate or cocoa, and in many instances this also applies to the drinking of large quantities of whole milk. In patients with urticaria, atopic eczema, or canker sores, the food diary may give certain leads as well as an elimination diet with challenge. A food diary is tedious to keep and very often lacks detail which may be important, like how the food was cooked and what spices were used in the cooking.

There are a few final remarks that I would like to make—treat the state of the disease, not its name. For a dry skin, use creams and emollients, and for the wet weeping problem, use compresses and drying lotions. Some patients do well with a little tincture of time and neglect. Know the course of the disease. Lichen planus, for instance, heals with pigmentation; and this does not need therapy. Give the medication a chance to work over five to seven days; do not change unless irritation occurs. Too often lesions are watched too long or treated too long without a biopsy being taken. Consider the cost of the preparation. Some patients will not get the medication when they hear what it costs or will not get a refill. Lastly, do not use things which stink, stain, or sting.

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Dermographism and Erythematous Lines Following Tongue Blade Stroking in Two Cases of Barbiturate Poisoning

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Two patients in deep coma from barbiturate poisoning were stroked with tongue blades to elicit abdominal reflexes when first examined. Dermographism developed in both patients which was followed by an erythematous line that persisted.

CUTANEOUS signs and pathologic findings in a patient in coma from drug overdose and other causes are becoming more clearly defined. Clinically the skin frequently shows irregular erythematous hive-like lesions, vesicles, and bullae which appear commonly over pressure points. Leavell *et al*[1, 2] observed intra- and subepidermal vesicles, necrosis of sweat glands, and dilated sweat pores in carbon monoxide poisoning and barbiturate overdose.

Report of Case 1

A 23-year-old white, married female was admitted to the University of Kentucky Medical Center because of coma for approximately 12 hours. Her family stated that she had been depressed and they suspected that she had taken an overdose of sleeping pills.

Physical examination revealed: Blood pressure 130/80 mm Hg, pulse 140/min and regular, respirations 32/min, temperature 104°F rectally. There was an irregularly shaped, erythematous, slightly elevated, edematous, hive-like lesion 3.0 cm in diameter on the medial aspect of each knee. Five small vesicles measuring 0.1 to 0.3 cm in diameter were noted on the surface of one lesion. Surrounding the lesions were erythematous areas which appeared to be scratches. Similar smaller lesions were seen on the left buttock and left forearm. Erythematous lines measuring 0.3 by 10 cm were present on the anterior aspect of each thigh beneath the elastic band of the patient's panties, as well as on the skin covered by the elastic band of the brassiere. The pupils were small but reacted to light. Decreased breath sounds were heard throughout both lung fields. The left lower base was dull to percussion. There were scattered ronchi in the left lower lobe. The patient moved her arms and legs slightly following deep pressure. Tendon reflexes were absent throughout.

Laboratory studies revealed: *CBC*: Hematocrit 44.6%, hemoglobin 14.7 grams/100 ml, white blood cell count 21,600/cubic mm. Differential count: Polymorphonuclears 42%, stabs 49%, lymphocytes 8%, monocytes 1%. *Urinalysis:* specific gravity 1.022, color amber, pH 6.0, glucose 0, protein 0, red cells 0, white cells 0. *Serum:* glucose 135 mg/100 ml, creatinine 1.3 mg/100 ml, sodium 142 mEq/liter, potassium 4.1 mEq/liter, carbon dioxide 20 mEq/liter, chloride 104 mEq/liter. *Blood Gases:* PO_2 54 mm Hg, PCO_2 33.5 mm Hg, HCO^-_3 18.6 mM/liter, pH 7.40, hemoglobin saturation 87.5%. *Spinal Fluid:* pressure 240 mm CSF, appearance clear, white blood cells 0, glucose 96 mg/100 ml, protein 20 mg/100 ml, Pandy negative, chloride 122 mEq/liter. *Bleeding Studies:* fibrinogen 375 mg/100 ml, prothrombin time 13.7 seconds, control 11.5 seconds.

Serum amobarbital was 1.6 mg% and serum secobarbital 1.2 mg%. Culture of nasotracheal aspirate grew Diplococcus pneumoniae. Chest x-ray revealed atelectasis of the right middle lobe and pneumonia of both the right middle

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and left lower lobes. Electrocardiogram showed sinus tachycardia.

Pathology

A biopsy of normal-appearing skin was taken from the anterior aspect of the left thigh on the day of admission. It showed dilatation of the blood vessels and a dense perivascular infiltrate composed of lymphocytes and polymorphonuclear leukocytes. Giemsa stain revealed many mast cells around blood vessels (Figure 2) and sweat glands (Figure 3). Mast cell granules were seen in the cytoplasm of the cells and also adjacent to the cells. The secretory cells of the sweat glands showed swelling and vacuolization of the cytoplasm (Figure 3). The cell walls of the sweat glands were indistinct. The nuclei of the cells were swollen and light in color.

At the time of admission, biopsies of three erythematous lesions from the knees and left buttock disclosed subcorneal vesicles, subepidermal vesicles, necrosis of superficial epidermal cells, necrosis of sweat glands, and dilated sweat pores. The dermal blood vessels showed a perivascular infiltrate of histiocytes, lymphocytes, polymornuclear cells, and occasional mast cells. Some vessels were infiltrated and occluded by polymorphonuclear leukocytes. There was enlargement and proliferation of endothelial cells. Rebiopsy of a lesion six days later showed normal sweat glands.

Course in Hospital

The patient was intubated, nasogastric and central venous pressure tubes were inserted and she was placed on a mechanical respirator. Medication consisted of aqueous penicillin G 5,000,000 u intravenously every six hours and Kanamycin 500 mg intramuscularly every twelve hours.

At the time of admission, the right upper quadrant was stroked with a tongue blade in an effort to elicit the abdominal reflexes. The skin appeared clinically to be normal. The area became erythematous, followed by development of a wheal and surrounded by a peripheral red flare. The wheal was 0.4 cm wide, elevated to 0.2 cm, and white in color. The irregular, erythematous, macular flare extended 1.0 cm around the wheal. Both subsided after one hour. An erythematous line (Figure 1A) persisted for ten days in the area which was

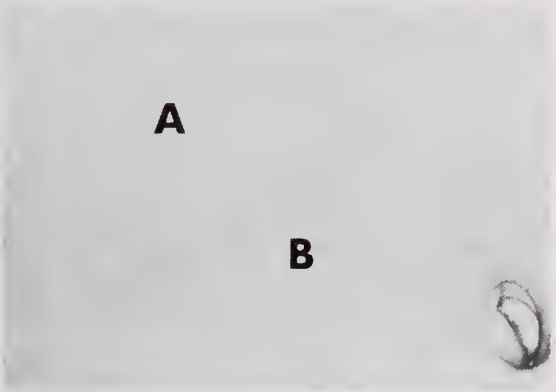


FIGURE 1. A is an erythematous line which followed stroking with a tongue blade at the time of admission. The second line, B, shows dermographism after stroking with a tongue blade five hours after admission.

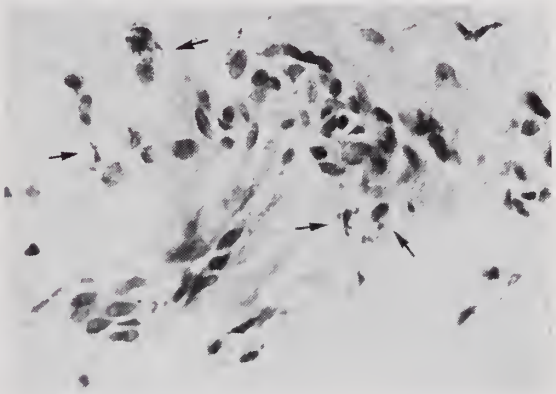


FIGURE 2. Shows mast cells in the dermis of normal-appearing skin. Arrows point to basophilic mast cell granules in the cytoplasm of the cells and adjacent tissue. (Giemsa stain X 400)

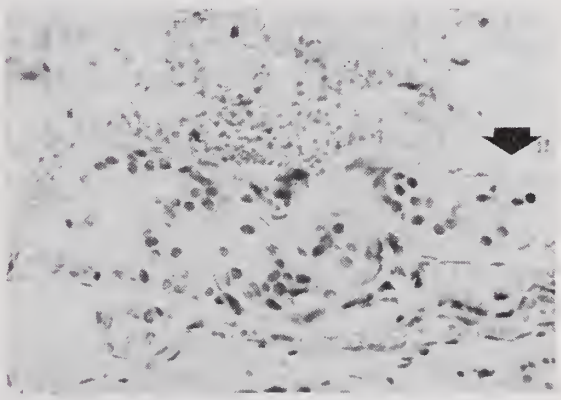


FIGURE 3. Arrow points to edema and vacuolization of the cytoplasm of sweat gland cells. The cell walls are indistinct. Biopsy was from normal-appearing skin. Mast cells are scattered around sweat glands. (Giemsa stain X 300)

stroked. The lesion faded with pressure. Its course was similar to that of lesions which were observed when the patient was first examined. They all gradually subsided after ten days. The response to stroking with a tongue blade

was typical of dermographism, except the erythema persisted.

Five hours after the patient was admitted a second area was stroked with a tongue blade applying approximately the same pressure as the first time. Erythema, wheal, and flare developed (Figure 1B) but the erythema did not persist as it did upon the first stroking. This response was characteristic of dermographism. Two days following admission the patient was restroked in the same area applying approximately the same pressure as previously. No dermographism developed.

She regained consciousness on the third hospital day and admitted that she had taken 12 Tuinal tablets at approximately 11:30 pm the night before admission. Recovery was complete and she was discharged from the hospital after ten days.

Report of Case 2

A 23-year-old white female was admitted to the University of Kentucky Medical Center because of coma of five hours duration. Her family stated that she had taken seventeen 100 mg secobarbital tablets.

Physical examination revealed: Blood pressure 140/90 mmHg, pulse 29/min and regular, respirations 20/min, temperature 98.8° F rectally. The patient was a well developed, well nourished white female who responded only to deep stimuli. The heart and lungs were clear to percussion and auscultation. No masses were palpable in the abdomen. The pupils were small; however, they reacted to light. There were no pathological reflexes. The patient moved her arms slightly following deep pressure.

Laboratory studies showed: *CBC*: Hematocrit 39.8%, hemoglobin 13.9 grams/100 ml, white blood cell count 10,200/cubic mm. *Differential Count:* Polymorphonuclear 57%, stabs 1%, eosinophils 1%, basophils 1%, lymphocytes 25%, atypical lymphocytes 10%, monocytes 5%. *Urinalysis*: color amber, glucose 0, protein 0, acetone 0, white cells 1-5/high power field. *Serum*: glucose 76 mg/100 ml, sodium 138 mEq/L, potassium 4.2 mEq/L, carbon dioxide 24 mEq/L, chloride 102 mEq/L, creatinine 1.1 mg/100 ml, urea nitrogen 6 mg/100 ml. *Blood Gases:* PO_2 115 mmHg, PCO_2 45 mmHg, pH 7.31, hemoglobin saturation 97.8%. *Bleeding Studies*: Platelets 250,000 per mm^3, prothrombin time 14.0 seconds, control 12 seconds, fibrinogen 350 mg/100 ml.

Course in Hospital

The patient was catheterized, given 5% dextrose in water intravenously, and a nasograstric tube was inserted. When we saw her approximately 12 hours after admission, there were erythematous lines in the areas which were stroked with the tongue blade to elicit abdominal reflexes. The house officer who examined the patient on admission stated that a wheal developed a few minutes after she was stroked with a tongue blade. When we stroked her abdomen with a broken tongue blade, erythema developed which was surrounded by a red flare 0.5 cm in width. After about three minutes, a wheal 0.5 cm in width developed in the central area. The wheal subsided after three minutes, and an erythematous line did not develop in the area. She was stroked in a similar fashion on her second hospital day. There was no reaction.

Her course in the hospital was one of progressive improvement, and she was discharged two days after admission fully awake. The erythematous lines persisted for the duration of her hospital stay.

Comment

Diagnosis of the cause of coma may be difficult. Recently, many nonspecific dermal adjuncts have been recorded as helpful. Erythematous lesions, vesicles, bullae, and sweat gland necrosis from diverse causes are documented. Leavell *et al*[1, 2] reported necrosis of sweat glands, dilated sweat pores, and intraepidermal and subepidermal vesicles in barbiturate overdose and carbon monoxide poisoning. Ackerman *et al*[3] noted erythematous lesions with sweat gland necrosis in drug overdose from methadone, imipramine, glutethimide, meprobamate, and hydrocodone bitartate. Parrish *et al*[4] described bullous skin lesions in a comatose patient following ingestion of morphine, metaqualone, lysol, and heroin, and after head trauma, cerebrovascular accident, and viral encephalitis. They further state that similar lesions may occur in non-comatose patients with various other neurologic symptoms (syringomyelia, post prefrontal lobotomy, brain tumor, ependymoma of the cervical spinal cord,

and derebrovascular accident with resultant hemiplegia).

The mechanism by which the cutaneous lesions are caused is open to debate. Whether they are the result of trauma, pressure, or other factors is intriguing. Mandy *et al*[5] suggest that the lesions are of traumatic etiology. Alexander[6] reports that bullous skin lesions will develop in patients with drug overdose following pressure to the skin over bony prominences for several hours. In Case 1, erythematous lines underlying the elastic bands in panties and brassiere imply that external pressure may be a factor. Additionally, at the time of admission, an erythematous linear lesion which persisted for ten days in Case 1 and two days in Case 2 was caused by mild stroking with a tongue blade. Two days later no lesions were produced in either case following stroking with a tongue blade. Apparently the factors responsible for inducing skin lesions and dermographism had disappeared.

Temperature variations, although nonspecific, may be helpful in the diagnosis of coma from drug overdose. Sweating is a principal mechanism by which body temperature is regulated. In the case being presented, there was edema and vacuolization of the cytoplasm of sweat glands in skin that appeared normal. This would indicate that there could be altered physiology of the sweat glands of the entire body which could in turn affect body temperature. The time of regeneration of necrotic sweat glands in isolated erythematous lesions is also important, as temperature variations in the drug-induced comatose patient may be affected by this change.[1, 2] In biopsies taken from the same erythematous lesions at 5, 10, and 15 day intervals, the first two examinations revealed necrosis of eccrine sweat glands. They appeared normal in the specimen taken at 15 days.[5] The biopsy of three lesions taken at the time our patient was admitted disclosed sweat gland necrosis. Six days later a biopsy of the same lesion showed normal-appearing sweat glands. This would indicate that sweat gland regeneration occurred in six days. It is possible that it could occur in fewer than six days as cells of epidermal origin regenerate rapidly.

While the vascular findings are of interest, they do not point to specific diagnosis. We found vasodilatation and a perivascular infiltrate in skin which appeared to be normal. The erythematous lesions showed occlusion of dermal blood vessels. Many polymorphonuclear leukocytes were seen in dermal blood vessel walls. These observations are supported by Goodman[7] who states that large doses of barbiturates produce dilatation of finer blood vessels by a direct effect on their musculation and that excessive concentrations may dilate and injure capillary beds. Chart 1 offers a comparison of histologic features seen in normal skin and an erythematous lesion. Many mast cells were present in the skin, whereas there were relatively few in the lesions. It would appear that a number of mast cells had degranulated and disappeared upon formation of a visible lesion.

CHART 1

	Normal Appearing Skin	Erythematous Lesion
Mast Cells	+++	+
Vasodilatation	+++	+
Vascular Occlusion	0	+
Lymphocytes	+++	++
Polymorphonuclear Cells	+	+++
Histiocytes	+	+++
Endothelial Cell Enlargement and Proliferation	0	++
Sweat Gland Necrosis	0	+
Sweat Gland Cell Edema	+	0
Subcorneal Vesicle	0	++
Subepidermal Vesicle	0	++
Epidermal Necrosis	0	+++

CHART 1. A comparison of histologic features of normal-appearing skin and three erythematous lesions at the time of admission. 0 = absent; + = mild; ++ = modest; +++ = severe.

The pathogenesis of cutaneous lesions from drug overdose has not been clearly defined in man or by animal experiments. From our two cases, however, conclusions may be drawn that add to the available knowledge.

When first examined and the patient is in deep coma, and the blood barbiturate levels are highest, clinically normal appearing skin shows pathological features. These changes include increased numbers of mast cells, vacuolization, and edema of sweat gland cells. At this stage, when the skin is stroked with light pressure as a tongue blade, dermographism develops which is followed by a lasting erythematous line. This line is similar in appearance and duration to the cutaneous lesions that have been described by Leavell *et al*.[1, 2] Permission for biopsy of these lesions was not obtained; however, they would probably show

GENERIC AND TRADE NAMES OF DRUGS

Sodium Secobarbital and Sodium Amobarbital—Tuinal
Kanamycin sulfate—Kantrex
Potassium Penicillin G—Pfizerpen

sweat gland necrosis that has been described by Leavell *et al.*[1, 2]

During the first hospital day, when the coma is less pronounced, stroking the skin with a tongue blade produces dermographism, however no lasting erythematous line. During the second hospital day, when the patient becomes more alert, stroking the skin with a tongue blade produces no dermographism or lasting lesion.

In an attempt to further work out the pathogenesis of the cutaneous lesions, we have injected intradermally 0.1 cc of standard intravenous solutions of bartiturates into humans and rabbits. Within 30 seconds, a target-like lesion is noted which has a red border and a black center. Biopsy of these lesions in the rabbit shows necrosis of collagen and epidermis. There is rapid regeneration and the lesions in man and animal heal in about one month with a slightly depressed scar.

It may be postulated from the above that pressure from the tongue blade concentrates the barbiturates that are circulating in the tissue to a sufficient degree that a permanent lesion results. This concentration is not as much nor is the result as severe as when intradermal injection of barbiturates is carried out.

Dermographism has been associated with diverse underlying conditions. It was noted in Mediterranean fever in identical twins.[8] Winkelman[9] proposed that dermographism could be produced by exerting modest pressure on the skin of normal individuals following application of tetrahydrofurfuryl nicotinate. This supports the theory that drugs predispose to dermographism.

Lewis[10] produced dermagraphism in apparently normal patients by stroking the skin with a blunt point, after which a red line limited to the area of stroking developed in 3 to 15 seconds. A flare extending irregularly for some distance on either side of the red line appeared within a few seconds followed by a wheal which completely replaced the red mark. All signs usually disappeared in 30 to 45 minutes. This is commonly known as the triple response.

The mechanism of dermographism in our patients is open to speculation. A possibility is that the mast cells which were seen microscopically in increased number liberate histamine which in turn causes the reaction. In support of this theory, Ackerman[11] believes that mast cells undergo degranulation and dissolution with the liberation of histamine into the blood plasma or intercellular fluid. Furthermore, Goodman *et al*[12] submit that when histamine is pricked or injected into the skin, it produces the characteristic triad of phenomena known as the triple response.

The dermographism in our cases was unusual. Stroking with a tongue blade produced three different types of response: 1) At the time of admission, there was a triple response followed by an erythematous line which persisted for ten days in Case 1 and two days in Case 2 (a quadruple response). 2) During the first day of admission, there was dermographism but no persistent erythema. 3) Two days after admission there was no reaction. The factors which apparently were responsible for production of the first and second reactions had disappeared by the second day.

It is obvious that erythematous lesions, vesicles, bullae, and temperature elevation are not specific effects of drugs. Sweat gland necrosis is the one definite alteration indicating drug overdose and is only observed after pathologic examination which may require two or three days. The quadruple response and later dermographism in our patients were very striking. Testing for these signs may prove to be a quick specific adjunct to the diagnosis of drug-induced coma.

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Medical Progress

Urolithiasis

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UROLITHIASIS, that is, stones in the urinary tract, are a frequent medical and surgical problem. This discussion deals with those stones which are formed and are located in the kidney, and with those which obstruct or pass through the ureter.

Of great importance is the fact that there is no common denominator on which to base the cause of stone formation. However, a careful and methodical evaluation of the stone forming patient can give the practicing physician considerable insight into the problem in regard not only to the diagnosis but also intelligent management.

Surgical removal of renal or ureteral calculi is but a small part of the physician's responsibility toward rehabilitation of the patient with chronic renal calculus disease.

The first and most important part of this discussion pertains to the etiology of the stone formation.

In order for a stone to form, there must be a beginning. At the present time, there are several concepts of calculogenesis, the most plausible of which is that there must be a core or nucleus upon which the precipitation occurs. It is reasonable to assume that injury of some sort, such as infection, occurs to the cells of the collecting tubule, and the mucosa ulcerates. The ulcerated mucosa may then serve as a nidus upon which ions in super-saturated urine can crystallize and adhere. Thus, most stones probably develop by precipitation of crystals on an organic matrix.

Super-saturation, that is, increased concentration of salts and organic compounds may be due to low fluid intake, water loss in febrile disease, vomiting and diarrhea, or excessively hot weather.

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The pH of the urine plays an important factor in crystallization, in that some inorganic compounds, such as calcium oxalate and calcium phosphate, are less soluble and are prone to precipitation and crystallization in an alkaline urine. Organic compounds, such as uric acid and cystine, are less soluble in an acid urine and, if present in sufficient concentration, will form a stone. The pH is easily altered by diet, ingestion of acid or alkaline medications, and by urea splitting organisms such as staph, strep, and proteus which results in an alkaline urine.

Stasis, caused by obstruction, also is of major importance in that it results in crystals being retained; and it is also conducive to infection.

There are several important clinical causes of urinary calculi which result in the hyperexcretion of relatively insoluble urinary constituants.

The majority of stones contain calcium. Calcium metabolism is controlled by the parathyroid glands. Parathyroid hormone has three primary effects: mobilization of calcium from bone, increased tubular reabsorption of calcium, and decreased tubular reabsorption of phosphorus. Thus, a parathyroid tumor secretes an excess of parathyroid hormone which results in hypercalcemia, hypophosphatemia, and hypercalciuria. The latter contributes to supersaturation of calcium in the urine and, thus, predisposes these patients to stone formation. Of importance is the fact that 40% of calcium is bound to protein and 60% is ionized; therefore, a patient may have a high normal serum calcium and a low protein and actually, in truth, have an elevated ionized serum calcium secondary to hyperparathyroidism. Thus, if one had not noted the low total protein, the diagnosis of hyperparathyroidism might not have been seriously considered. X-rays of the teeth

and the phalanges are also an important diagnostic tool in that one may see loss of the lamina dura about the teeth and subperiosteal bone reabsorption in the phalanges secondary to excessive parathyroid hormone.

Elevation of the serum calcium, with or without a reduced serum phosphorus, remains the most valuable clue to the presence of hyperparathyroidism. However, a serum calcium elevation may be present only intermittently in patients whose recurrent urolithiasis are in fact due to either parathyroid adenoma or hyperplasia. In order to unmask this problem, the tubular reabsorption of phosphate should be determined. This test is performed with the patient in the fasting state. A urine and blood specimen are taken at the same time and the concentration in milligrams percent of phosphorus and creatinine are determined in the urine and serum. The tubular reabsorption of phosphate is calculated using the following formula:

$$\% \text{ TRP} = 100 - 100 \times \frac{\text{Pu Crs}}{\text{Ps Cru}}$$

A value of less than 90% is indicative of hyperparathyroidism.

One of the most important causes of stone formation is idiopathic hypercalciuria, which is thought by some investigators to be secondary to a renal tubular defect which decreases the tubular reabsorption of calcium resulting in hypercalciuria. This loss of calcium in the urine would conceivably stimulate parathyroid activity, producing hyperphosphaturia and hypophosphatemia. The laboratory findings in this problem are a normal serum calcium, elevated 24-hour urine calcium (250-400 mg), and a low serum phosphorus.

Renal tubular acidosis, secondary to a distal tubular defect in urinary acidification, should always be considered in recurrent urolithiasis. This problem is secondary to decreased hydrogen ion secretion in the distal tubule with impairment of the conservation of base. There is an increase in the distal tubular secretion of potassium in an attempt to off-set the depression of hydrogen ion secretion. This does not compensate completely, and increased amounts of calcium and sodium are excreted. Loss of sodium in urine results in a fall in serum sodium, which stimulates the osmoregulatory system to suppress the release of anti-diuretic hormone, which results in polyuria. This causes a decrease in plasma volume which in turn stimulates an increase in aldosterone. This results in an increase in sodium and chloride reabsorption by the kidney, thus causing hyperchloremia. The hypercalciuria and alkaline urine predisposes to stone formation.

The diagnosis of renal tubular acidosis as the cause of multiple medullary stones can often be made in the nonazotemic patient by administering an oral dose of ammonium chloride, 0.1 gm per kg, and then obtaining a plasma bicarbonate concentration and urine pH measurements within the next six hours. A pH above 5.3 when the CO_2 is below 22 is diagnostic.

Bone diseases are conducive to stone formation. In this category, one must consider osteoporosis in which there is a normal rate of resorption but a reduced rate of formation. This produces hypercalciuria. This problem is seen in those patients with prolonged immobilization, Paget's disease, Cushing's disease, and the administration of steroids.

Destructive bone diseases such as metastatic carcinoma and multiple myeloma result in excessive release of calcium.

The milk alkali syndrome may be a cause of stones and is the result of patients with peptic ulcers taking an excessive amount of milk and alkali. This causes alkalosis, hypercalcemia, and azotemia.

Hypervitaminosis D may cause an increase in serum calcium in that it results in an increase in calcium reabsorption from the intestines.

Sarcoidosis is another cause of stones. The etiology of the hypercalcemia is an excessive absorption of calcium from the GI tract and is thought to be metabolic in etiology.

Sarcoidosis or Vitamin D excess must be considered in patients with stones who have hypercalcemia and hypercalciuria, and in whom we have ruled out hyperparathyroidism. In these patients, Prednisone, 10 mg, four times a day for a week should suppress the hypercalcemia and hypercalciuria.

Uric acid stones account for five to ten percent of all kidney stones. The excessive uric acid is derived from end products of the catabolism of purines. Uric acid stones are seen in patients with gout, lymphomas, leukemia, polycythemia, and also in those tumor patients treated with chemotherapy. These organic

stones form in an acid urine; therefore, a urine pH of 4.5 to 5.5 is present. The diagnosis is based upon hyperuricemia, uric acid crystals in the urine, an acid urine, and a stone analysis revealing the stone to be composed of uric acid.

Cystine stone formers are rare, and this malady is always familial. In this disease, there is an excessive amount of cystine, lysine, arginine, and ornithine excreted in the urine. Calculi are common in these patients and the diagnosis is based upon finding typical hexagonal crystals in the urine, a cystine stone on analysis, and an increase in the above four amino acids in the urine.

A stone in the urinary tract causes certain pathological changes. The size, shape, type of surface of the stone, and location dictates the pathological changes which occur. Locally, ulceration of the mucosa occurs. If the stone causes obstruction, then hydronephrosis results. This resulting stasis is conducive to infection, and these factors further contribute to growth of the calculus and even to the formation of new calculi. A calculus pyelonephritis and even pyonephrosis is not uncommon.

It is extremely important to know exactly the chemical composition of the stone. An attempt to determine the composition of the stone by merely examining it is foolhardy. All stones should be sent to a stone analysis laboratory for careful analysis, since this will have great bearing on the medical treatment.

Radiopacity of stones is of some importance. The following stones are listed in order of decreasing opacity: calcium phosphate, calcium oxalate, magnesium ammonium phosphate, cystine, and uric acid. Calcium phosphate stones thus are markedly opaque, and uric acid stones radiolucent.

The clinical findings may be rather obvious, but at times vague and elusive and, of course, at times there are no symptoms or signs of calculus disease.

The symptoms are influenced by irritation, obstruction, and infection. A stone in the calyx is usually asymptomatic. If the stone is free and obstructs a calyx or the ureteropelvic junction, then the patient may experience dull flank pain from parenchymal and capsular distention. Severe colic results from increased peristalsis and smooth muscle spasm of the calyces and pelvis. Microscopic hematuria is noted in 75% of the patients and gross hematuria in 50%. The patient may experience nausea and vomiting. Abdominal distention may result from paralyic ileus. Rigors and fever occur when infection is present.

One must not forget to question the patient about various things conducive to stone formation such as the fluid intake, diet, drugs such as alkali and Vitamin D, immobilization, previous stones, family history of stones, gout, and the various medical diseases conducive to stone formation.

The most important sign of a stone is usually tenderness in the flank area on percussion. The patient may also have moderate upper quadrant tenderness on palpation. Guarding and even an ileus may be noted, especially if infection is present. Occasionally, one may palpate a hydronephrotic kidney.

There are several laboratory studies which are important in giving the physician insight into the problem. The pH of the urine is important. For instance, if the pH is persistently greater than 7.6, there is a good possibility that urea splitting organisms are present. A urine pH of more than 6.5 suggests the possibility of renal tubular acidosis. The microscopic examination of the urine may reveal crystals which are involved in the problem such as uric acid crystals, or the typical diagnostic hexagonal cystine crystals of cystinuria.

Of obvious importance is the finding of bacteria in the urine sediment.

An elevated 24-hour urine calcium is frequently present in a patient with such problems as idiopathic hypercalciuria and hyperparathyroidism.

Blood studies which should be performed for obvious reasons are: calcium, phosphorus, protein, alkaline phosphatase, uric acid, CO_2, and chloride.

Again, the most important laboratory study of all is the stone analysis.

Radiographic studies are of extreme importance. Ninety percent of stones are opaque and can be visualized on a plain film. One must be able to differentiate these from calcified nodes, gall stones, rib cartilage, and pills.

X-ray of bones is important when such diseases as Paget's, multiple myeloma, or hyperparathyroidism are suspected.

The intravenous pyelogram is an indispensable tool. It provides the physician with a rough idea of renal function. If obstruction is present,

it will reveal the amount of dilation and the location of the obstruction. If severe obstruction is present, there may be no visualization of the collecting system. However, an increase in opacity of the parenchyma occurs. Thus, a nephrogram is obtained and means that there is a good kidney present which should return to normal when the obstruction is relieved.

The infusion pyelogram is of even more importance than an intravenous pyelogram since it provides better visualization. In this study, as much as 150 ml of contrast medium can be given intravenously.

Retrograde pyelograms are not indicated unless the intravenous pyclogram does not provide adequate diagnostic findings.

A differential diagnosis of renal stones should include pyelonephritis, renal tuberculosis, renal carcinoma, renal infarction, and renal vein thrombosis.

The most common complications are obstruction which, if prolonged, results in hydronephrotic atrophy, infection resulting in pyelonephritis, and occasionally epidermoid carcinoma. The treatment of stones is divided into surgical and medical. A small stone in a calyx which is not causing any problem is best left alone.

A staghorn calculus filling the calyces and renal pelvis may grow very slowly and may not cause any pain; and when infection is not present, surgery may not be indicated.

Stones proven to be cystine or uric acid in composition may possibly undergo dissolution with proper medical treatment. Obviously, surgery may be imperative if there is considerable pain, if infection cannot be eradicated, or if progressive renal parenchymal damage ensues.

Ureteral stones are to be discussed next. All of these stones have developed in the kidney, have become dislodged, and have passed into the ureter. The etiology of these stones has already been discussed.

The usual heralding symptom is that of sudden severe pain in the flank and/or lateral abdomen. It usually radiates from the kidney area to the lower quadrant or, if lying distally, into the medial thigh, scrotum, or labia. It is often colicky and agonizing. At times, there is only a constant ache. Hematuria is often present. An ileus may be present when obstruction is severe. Rigors and fever are frequently seen when infection is present.

The signs are frequently characteristic in that the patient is in agony, often pacing the floor or trying to get into a position of relief. The skin is frequently cold and clammy. Exquisite flank tenderness and at times abdominal rigidity are present.

The laboratory findings are virtually the same as one finds in renal stones.

Radiography frequently reveals an opaque stone along the course of the ureter. One must be able to differentiate these from calcified nodes and phleboliths. Once again, an IVP or, still better, an infusion pyelogram will reveal the stone in the ureter and some degree of dilatation of the upper tract proximal to the stone causing the obstruction. A radiolucent stone will appear as a negative shadow. The differential diagnosis should include pyelonephritis, ureteral tumor, renal infarction, renal vein thrombosis, cholelithiasis, and appendicitis.

The management of the acute problem is primarily based upon the size of the stone, in that approximately 80% of those measuring 0.4 cm or less will pass spontaneously in a two or three week period. The physician must relieve the patient's pain with an appropriate dose of narcotics as often as necessary. It is my personal opinion that an enzyme such as Avazime or Chymoral 100 may be of benefit if given early in that this may prevent mucosal edema which entraps the stone and prevents spontaneous passage. The urine must be strained in order to retrieve the stone for analysis.

Surgical intervention will become necessary if severe obstructive findings persist for a week or two, if it appears the stone is not progressing down the ureter in a sufficient time, or if infection intervenes. Removal also must be considered for economical reasons when the patient has, for instance, persistent pain and disability and is the sole provider for his family.

In the first part of this discussion, I mentioned that the surgical removal of renal and ureteral calculi was but a small part of the physician's responsibility. The most important part is the medical treatment which is based upon the complete evaluation and the stone analysis.

Calcium oxalate stone formers may have a familial history of urolithiasis. When this is the case, these patients are quite likely to form stones in the future. The most common finding

is idiopathic hypercalciuria, that is, a low serum phosphorus and an elevated urine calcium. There has been some success in treatment of these patients with oral phosphates such as K-Phos or Neutra-Phos. These oral phosphates cause an elevation in urinary pyrophosphates which solubilize calcium, reduce the urinary calcium, and decrease the urinary pH.

If the 24-hour urine calcium remains above 100 mg, then hydrochlorthiazide, 50 mg twice a day, may be tried. The thiazides may also be used when the phosphate is not well tolerated. The combination of thiazide and phosphate loading together is potentially dangerous if potassium depletion occurs.

Approximately 60% of patients with calcium oxalate stones have been found to have an elevated uric acid. Although the exact role uric acid plays in calcium oxalate stone formation is not known, preliminary reports indicate cessation of stone formation in 65% of patients treated with allopurinol.

Methylene blue, a dye, has been reported to be of significant benefit in over 50% of patients treated. The reason for this is that it is chemisorptive, thus, it is absorbed on the crystal surface and prevents further crystal growth. This compound is a direct inhibitor of calcium binding by oxalate and by matrix. It also reverses intracellular acidosis. The dosage is 65 mg three times a day.

Opaque calcium phosphate stones are most often found in association with metabolic diseases such as hyperparathyroidism, renal tubular acidosis, hypercalcemia of malignant disease, and immobilization. They are infrequently found in idiopathic hypercalciuria. Diagnosis is confirmed by stone analysis. Metabolic abnormalities must be corrected first if possible. Thiazides may be beneficial since they decrease urinary calcium and increase urinary magnesium. They should not be given with oral phosphates unless one insures that potassium depletion does not occur. Methylene blue may be of benefit in treatment of these patients.

Patients with proven renal tubular acidosis can usually be effectively treated with alkali therapy which is designed to reverse the systemic acidosis and thus decrease the hypercalciuria.

Urinary tract infection found in association with urinary calculi implies the presence of magnesium ammonium phosphate stones. Obstruction, malignant disease, and hyperparathyroidism predispose the patient to urinary tract infection. A vigorous attempt at sterilizing the urine with antibiotics is necessary. Since infection alone predisposes to stone formation by elevating the urine pH, these patients should be treated with Methylene blue, because of its ability to lower pH in infected patients and because it competively blocks binding of ions by the matrix.

Patients with uratic calculi should be questioned as to the ingestion of thiazides, salicylates, and steroids, since these drugs induce an elevation of serum and urinary uric acid. Treatment should be based on maintaining a high urinary output, alkalinization of the urine, and allopurinol.

Cystine stone formers have a familial history and should also be treated with a high fluid intake, alkalinization, and if not controlled, then D-Penicillimine (cupramine) should be used. This drug combines with cystine making it soluble in urine.

Generally one should have all these patients maintain a high fluid intake in order to insure a urinary output of 100 ml of urine per hour. They should avoid dehydration and stay on a low calcium diet.

Those patients with recurrent stones containing calcium may benefit from the use of a water demineralizer to lower the calcium in their drinking water if this water is analyzed and is found to be high in calcium.

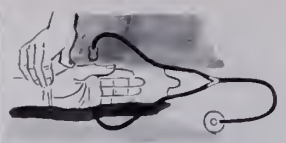
In summary, rational methods of evaluating and treating the patient with stone disease have been discussed. In general, cystine and uric acid calculi can be treated adequately. Phosphatic calculi of infection may be prevented by combinations of surgical and medical treatment. Present medical regimens for therapy of calcium oxalate and calcium phosphate calculi are varied and no one regimen is clearly more effective.

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GRAND ROUNDS



The University of Kentucky Medical Center

The following presentation represents the beginning ofa new series, to be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

Management Principles of the Surgical Neonate

THE purpose of today's rounds is to present useful guidelines for the management and care of the surgical neonate for anyone who may have the opportunity to participate in this special patient's care. The viewpoints expressed are not dogmatic, but are some of the practices that have been found useful.

Transporting the Newborn

Although distances between the patient and referral center often require hours of travel for the surgical neonate, preliminary measures may be instituted at the outset to make the journey safer. Precautions observed are determined in part by the neonate's basic problem, size, and general physical condition. Some states have supported neonatal programs to transport these infants by helicopter or by ambulance services specifically equipped for the neonate's safe transport.

Precautionary measures include prevention and/or recognition and treatment of *hypoglycemia, hypoxia, hypothermia,* and *aspiration.* The rapid metabolic rate of the newborn, and especially the premature, makes this patient a likely candidate for hypoglycemia. An appropriately regulated intravenous drip of a 10% dextrose solution usually prevents such an occurrence, but does not necessarily guarantee against it. A bolus of glucose or "honey" placed in the stomach by catheter has been suggested as prophylaxis against hypoglycemia during transit. There is no assurance, however, of its absorption, and gastrointestinal anomalies may enhance the probability of regurgitation and aspiration. The blood sugar should be monitored and is easily accomplished with the use of re-agent impregnated commercially available dip sticks and a micro-serum sample from the patient. This saves time and additional expense.

Hypoxia must be prevented, and oxygen may be administered in transit by mask, isolette, or with assisted ventilation via an endotracheal tube. It is difficult to transport an infant with an endotracheal tube. It is easily dislodged and requires continuous positive pressure-assisted ventilation. A variety of pathological entities may be worsened with assisted ventilation because of trapped air. A pneumothorax may be converted to a tension pneumothorax, and infants with lobar emphysema and cystic disease of the newborn may deteriorate when ventilation is assisted. Oxygen therapy via nasogastric catheter is mentioned only to condemn it and is of historical importance only. No current evidence exists to support this practice, and there are many obvious hazards.

Conservation of body heat during transport is the best method to prevent hypothermia. The newborn and premature have poor thermoregulatory mechanisms. Thermogenesis by shivering is non-existent, and highly developed controls to decrease heat loss are poorly developed. The thermo-regulatory mechanism of the central nervous system is immature, and as a consequence, the newborn tends to assume the ambient environmental temperature. Moderate hypothermia in the newborn is poorly tolerated and was one of the major factors in the high premature infant mortality in the pre-isolette era. Humans, as well as other mammalian species, experience an increased oxygen consumption, out of proportion to moderate degrees of hypothermia during the first six to

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eight weeks of life. Temperature maintenanee during transport is most easily controlled by a heated isolette with a self-contained power pack or a warming unit for automotive eurrents. Ordinary blankets with an inner layer of aluminum foil are also effective. These preeautions reduee heat loss from conduetion, conveetion, and radiation, insulating the infant from the surrounding environment.

Regurgitation with morbid or fatal chemieal aspiration is an omnipresent potential threat. The likelihood is enhanced when congenital obstruetion exists in the gastrointestinal tract. A well plaeed soft polyethylene 2 or 3 millimeter nasogastric eatheter followed by gentle aspiration offers added assuranee against this hazard. If the patient's condition permits, transporting prone plaees the esophago-gastric junction in a high position relative to the air-fluid level in the stomach. Then, if regurgitation occurs, air is more likely to reflux than the gastric contents in the dependent portion of the stomach. Every mother instinctively practices this dictum when she "burps" her new baby in some kind of prone position. Prone positioning is likewise important in tracheoesophageal fistula and atresia by the same reasoning. Although there is congenital discontinuity of the esophagus, assuming the usual anatomic arrangement, gastric reflux is markedly decreased into the distal esophagus with less aspiration via the fistula.

Intravenous Administration

A suitable seleetion site must first be determined for intravenous administration. A scalp vein in the neonate is very suitable. Depending on the infant's condition and objectives of treatment, a venous cutdown may be required peripherally. A skilled physician at times may be able to cannulate these veins percutaneously. The umbilical vein of the neonate has frequently been used because of the simplicity with which it may be cannulated. Its common usage should be discouraged beease of potential pylephlebitis, portal vein thrombosis, portal hypertension, or necrotizing enterocolitis assoeiated with the practice. An exchange transfusion for hyperbilirubinemia may require cannulation of the umbilical vein. However, with the advent of bilirubin lights, the necessity for exchange transfusions has been markedly deereased. Hyperbilirubinemia is frequently assoeiated with GI tract malformations, especially duodenal atresia. The exact explanation is laeking, although it is thought that stagnation of conjugated bilirubin in the gut is deconjugated by beta-glueuronidase and reabsorbed.

Central venous alimentation with hyperosmotie solutions via long-term indwelling eatheters is now eommon. Immaculately sterile operating room teehnique for the placement of these catheters is stressed. When silicone rubber eatheters are used, it is helpful to bind the eatheter suture to the catheter itself with siliеone glue to prevent slippage. A suture tied tightly enough to hold firmly will oeclude the lumen beeause of the eatheter pliability. Administration of 10% dextrose or greater eoneentration sugar solutions in usual volumes may result in blood eoncentrations in excess of the renal threshold with a consequent osmotic diuresis. Lethal dehydration may result, and the urine should be frequently monitored for sugar when these solutions are administered.

Blood administration is often required in the surgical neonate and a "walking donor" seems preferable, especially in the potential multiple transfusion patient. The patient is typed and eross-matched to a member of the team who is caring for him, thus avoiding the compounding risk of a multiple donor. The donor is always available, the patient is assured of warm and fresh blood, there is no waste of unused amounts, and a knowledge of the walking donor's history is better than the donor at large. Transfusions of 10 to 20 cubic centimeters of whole blood per kilogram are usually well tolerated by the newborn. The normal hemoglobin of the newborn is 18 to 20 grams, at two to three months 10 to 12 grams, and greater than three months again begins to increase. The initial fall, especially in the premature, is thought to result from a lack of stimulation in the erythropeitin mechanism. One or 2 milligrams of parenteral vitamin K_1 is helpful to the hypoprothrombinemic newborn.

Fluid and Electrolyte Requirements

A knowledge of fluid and electrolyte requirements is necessary to manage the surgical neonate. The newborn's interstitial fluid is in excess and there is no obligatory requirement

during the first 24 to 48 hours. The excess is diuresed during the first week of life and explains the usual loss of weight during that period. A solute load is handled poorly during the first few days of life because of renal immaturity.

The neonate's fluid and electrolyte requirement is based on 150 cubic centimeters per kilogram per 24-hour period, plus 3 milliequivalents of NaCl and 2 milliequivalents of potassium chloride per 100 cubic centimeters of dextrose solution infused. In addition to these basic fluid requirements, any additional loss needs to be replaced. A newborn with gastrointestinal high obstruction may drain 300 cubic centimenters per 24 hours from the gastric catheter which in a 2 kilogram infant may be equal to his total 24-hour fluid requirement. It is useful to obtain electrolyte measurements on small aliquots of gastric losses to more accurately replace the electrolyte content. The sodium will be about 70 milliequivalents and the potassium 10 milliequivalents per liter.

In larger children, it is more convenient and accurate to calculate fluid requirements on a body surface area basis. Since body surface area is determined by dimensions and weight, it is generally felt that in the neonate and premature infant, body weight is probably a more accurate measurement than surface area. Since fluid requirements at any weight are the same on a meter-squared basis, namely 1500 cubic centimeters per meter squared per 24 hours, knowing the body surface one can readily calculate the fluid requirement at any age. If one counts off on his fingers, each finger representing .1 of a meter squared and then learns the following progression of 3, 6, 12, 18, 24, 30, 36, 48, 60, 70, 80, 90, 100, 110, with these numbers representing weight in pounds, then one has a readily available surface area table at any given weight (Table). Urine output is considered adequate if it averages 1 to 2 cubic centimeters per kilogram per hour. Although the newborn requires 150 cubic centimeters per kilogram per 24 hours, the adult requirement is only 35 cubic centimeters per kilogram per 24 hours because of the disparity between weight and surface area.

TABLE

BSA m^2	.1	.2	.3	.4	.5
Wt. (lbs.)	3	6	12	18	24
BSA m^2	.6	.7	.8	.9	1.0
Wt. (lbs.)	30	36	42	48	60
BSA m^2	1.1	1.2	1.3	1.4	1.5
Wt. (lbs.)	70	80	90	100	110

A readily learned table converting body weight in pounds to meters squared. By counting the progression on one's fingers and each finger representing .1 meter squared, one may then convert weight to surface area and calculate the fluid requirement at any weight. For weights between the stated one may interpolate.

Pulmonary Care

A large number of complications associated with surgery are on a pulmonary basis. Postoperative atelectasis is common, especially following thoracotomy. Considering that the newborn's trachea is only 5 to 6 millimeters in diameter, mainstem bronchi 3 to 4 millimeters, and segmental 1 to 3 millimeters, it is obvious that the slightest secretions may obstruct these structures with resultant atelectasis. Prevention of this occurrence is simpler than its treatment. Prophylactic measures include turning from side to side every 30 minutes to one hour, gentle stimulation to cry and nasopharyngeal suctioning. The treatment of atelectasis, once it has occurred, includes all the preventative measures, plus percussion, endotracheal intubation, suctioning, irrigation, and positive pressure. Caution must be practiced, as excessive suctioning without intermittent oxygen or positive pressure may rapidly result in a fatal outcome. A head-up or head-down position is more advantageous depending on the situation. Elevation alleviates abdominal pressure on the diaphragm and also the likelihood of esophageal reflux. With the head-down, tracheobronchial secretions are more likely to drain.

Newborns are obligatory nose breathers, and an indwelling nasogastric tube may occlude 50% of the infant's airway. For this and other reasons, gastrostomies are frequently employed in the neonate undergoing an abdominal procedure. Immediately postoperatively it serves as a very effective vent and, with it properly functioning, prevents regurgitation and aspiration. It should never be clamped and later, even when the infant is fed, it should remain unclamped but elevated 15 to 25 centimeters with a drip chamber attached. In this

manner, when the intra-abdominal pressure and intra-gastric pressure is increased, the feeding backs into the chamber rather than reflux into the esophagus with potential aspiration and its consequences.

Humidity is an important adjunct, particularly in the postoperative thoracotomy neonate, and may be provided in several ways. Fifty-three milliliters of water per liter of gas are required to humidify it to 100% at 37° (alveolar temperature). If room air, which is 100% humidified, is warmed to 37°, the final humidity may be only 20%, depending on the original temperature of the room air. With these facts in mind, the ideal particle size for providing humidification is 1 to 10 micra. The ultrasonic humidifer provides such particle size and is considered useful. The moist warm surface within the isolette provides a very fertile environment for bacterial colonization, and isolettes so humidified should be changed every 24 to 48 hours.

Oxygen therapy for hypoxia may be provided in one of several ways. Most isolettes have adaptors for administering oxygen through them to obtain satisfactory levels. Despite high oxygen flow, with frequent opening of the ill neonate's isolette, satisfactory oxygen percent is seldom attained. Plastic hoods now available are very satisfactory, as they overcome the previously mentioned disadvantage while attaining an oxygen environment of 100% at the infant's nose and mouth, if desired, and at the same time allowing manipulation. Oxygen, like any other therapy, is potentially dangerous, and retrolental fibroplasia and pulmonary toxicity are well understood and documented and are avoidable complications. Both of these conditions require a PO_2 of over 100 millimeters Hg for several days. The key to their avoidance is to administer oxygen only in quantities that are required by the infant, while monitoring the inspired air and the blood gases by micro-technique. The high-risk infant for oxygen complications is the patient with occasional apneic episodes but otherwise normal respiratory function. This infant obviously should not be maintained in a high oxygen environment.

Blood gas samples may be obtained from the temporal, radial, or umbilical artery or from an arterialized heel stick. Arterial catheters are not without potential hazards. Embolization, thrombosis, and sepsis of the ileofemoral vessels have been associated with umbilical artery catheters. Warming and rubbing the heel prior to obtaining a heel stick sample results in arterialization of the capillary blood which approximates the values of a true arterial sample. The reliability decreases in proportion to the perfusion of peripheral tissues, and the more ill the infant, generally, the greater the discrepancy.

An endotracheal tube may be inserted in the neonate who needs mechanical ventilatory assistance. The internal diameter of an appropriate endotracheal tube in the newborn may be only 4 to 5 millimeters and resistance to flow is greater than without the tube. Therefore, an intubated infant generally requires mechanical assistance. Several infant respirators are available and the importance of close observation by experienced personnel of the respirator infant must be stressed. The endotracheal tube may inadvertently slip out of the trachea and into the esophagus without disturbing the adhesive tape. Secretions may crust within the tube and obstruct the already small lumen. Tube changes need to be frequent and often at 24 to 48 hour intervals.

Summary

The ultimate success in the treatment of the surgical neonate depends on many factors. Transporting the patient safely, appropriate monitoring, careful intravenous administration of fluid and electrolytes, and careful pulmonary care all may contribute to the ultimate success. Working closely with a neonatologist is also stressed for the patient's best interest.

Robert P. Berlin, M.D.
Assistant Professor
of Pediatric Surgery

SPECIAL ARTICLES

The Role of Community Health In the Education of Health Science Students

WILLIAM B. APPLEGATE, A.B.,* AND RICHARD C. LEVY, A.B.*

IN the majority of medical schools throughout the nation, the hospital-based specialist is the model used by medical students in preparing for careers as physicians. As recently stated by Dean Douglas Haynes, M.D., of the University of Louisville School of Medicine, "In the past, the typical medical student did not concern himself with the problems of the delivery of health care; he concentrated on his medical studies and fulfilled his clerkships in hospitals dedicated to the care of the poor, and then proceeded to practice on the well-to-do, setting aside a few hours a week for the municipal hospital as his contribution to the medical care of the economically disadvantaged."[1]

Because of societal pressures and health care legislation directed at establishing comprehensive medical services, many health care authorities have questioned the value of this traditional approach.[2] Medical educators are beginning to realize the role of the medical school is to provide some health services in the community to function as a setting for the education of medical students in the problems and challenges of delivering health care outside the hospital setting.[3]

The University of Louisville School of Medicine does not yet offer a community oriented experience as part of the curriculum. However, the Greater Louisville Organization for Health (GLOH), an independent student organization, does provide a mechanism for health science students to participate in the delivery of medical services in a community setting. The GLOH project was founded in the spring of 1969 and presently encompasses a community-based screening and minor treatment clinic, a health education program for junior high students, and a free physical examination project for poverty area youths. GLOH has evolved from a loosely structured group of idealists to a well-coordinated, multidisciplinary organization having an annual budget in excess of $37,000.

To date, the major accomplishment of GLOH has been the establishment of a screening clinic in the inner-city area of Portland.** After many months of planning with Portland residents, an old grocery store was renovated, and the Portland-GLOH Health Clinic was opened in April, 1971. The clinic is presently open two nights a week, and approximately 30 patients are seen each night.

Since one of GLOH's basic precepts is to promote an inter-disciplinary approach to health care problems, patients seen at the clinic are encouraged to undergo both medical and dental screening. Upon completion of screening, they are evaluated by a physician*** if any ailments are suspected. Problems such as colds and minor infections are treated in the clinic, while more serious problems are referred to appropriate health care agencies. The present referral system incorporates private practitioners as well as the Louisville General Hospital specialty clinics.

In an effort to assume a more comprehensive approach to community health problems,

*Senior medical students at the University of Louisville School of Medicine, Health Sciences Center, Louisville, Kentucky 40201

**As in many large cities, the poverty areas in Louisville are divided into several sectors, each of which is served by a council that receives an annual discretionary fund from the Office of Economic Opportunity. The Portland Area Council represents a poverty area with a population of 27,000.

***Medical activities are supervised by volunteer physicians from the Louisville community.

health education programs have been established in several poverty area junior high schools. These programs, run by pre-clinical health science students, have dealt with the topics of nutrition, drug abuse, and human reproductive biology. These sessions provide a learning experience for the health science students as well as junior high youths.

One of the earliest projects undertaken by GLOH consists of free physical examinations for poverty area youths. Among the organizations that have benefited from the approximately 2,000 physicals given to date are the Community Action Commission, the Follow-Through Program, the Neighborhood Youth Corps, various youth athletic programs, and several local day care centers.

From the outset, GLOH has been aided by the Jefferson County Medical Society. The society has created a special GLOH-Liaison Committee to act in an advisory capacity and to promote physician support. Although GLOH has been formally recognized by the University of Louisville School of Medicine, none of its programs have been incorporated into the curriculum. The University of Louisville School of Dentistry has encouraged student participation, and has agreed to furnish the Portland-GLOH Health Clinic with three dental chairs, which will serve as a community outreach dental clinic open during the daytime. The Kent School of Social Work has advocated student participation, and the Kentucky Nursing Association has encouraged Louisville nursing schools to support GLOH.

In conclusion, as exemplified by GLOH's projects, health science students are becoming increasingly involved in community health activities. In fact, some 58 student-run community health programs exist throughout the country.[4] Reflecting increased student involvement, some medical schools have begun to develop community health projects as a part of their curriculum. As this trend in medical education progresses, graduating health science students will be better prepared to face the challenges imposed by a changing health care system.

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1. Haynes, D. M.: A Letter from the Dean. *Tractions,* (University of Louisville student publication) Vol. 6, No. 1, March, 1971.
2. Kissick, W. L.: Health Policy Decisions for the 1970's. *NEJM* 282:1343, June 11, 1970.
3. Densen, P. M.: Medical Schools and the Delivery of Medical Care to the Community. *NEJM* 284:1157, May 20, 1971.
4. Compendium of Health Science Student Activities in Community Health. Prepared by the Standing Committee on Community Health of the Student American Medical Association.

EDITORIALS

The Second Mile

THIS month it was announced that William P. VonderHaar, M.D., would assume chairmanship of the recently established Department of Family Practice in the University of Louisville School of Medicine. At first thought, one feels it could not happen to a finer guy; but under the present circumstances, we are bound to feel that the School of Medicine is unusually fortunate; it is hard to believe that a better man for the post could be found. His 15 years in the pursuit of this specialty in private practice have given him an insight not to be acquired had he spent that time in full-time teaching. The respect and esteem in which he is held by his fellow physicians have been earned by faithful and diligent application to his patients and also by a very wide selection of civic activities aside from his daily schedule of professional work.



Doctor VonderHaar

Since his graduation in 1956, he has been very active in the affairs of the Jefferson County and Kentucky Medical Associations, as well as in the Academy of Family Physicians. He is a member of the Board of the Park-DuValle Neighborhood Health Center. He has just completed a term as Chairman of the Jefferson County Board of Education, in which position he spent a great deal of time and accomplished much. He was named the "Outstanding Young Man" by Louisville Jaycees in 1962 and "Man of the Year" by WHAS in 1963. He undertakes his new duties, therefore, with an unusual score of achievement for the first 16 years of his medical career.

Establishing and directing a brand new department, especially when there is so little precedent to follow from other schools, will be an unusual challenge. We who know and respect Doctor VonderHaar, and who at the same time have great loyalty for the U of L School of Medicine, have every confidence that his leadership will be as superb as it has been in so many of his other undertakings—we wish him well.

In 1938, Arnold Griswold, M.D., gave up his surgical practice in Louisville to become Professor and Chairman of the Department of Surgery at the Medical School; he continued with distinction in this capacity until 1952, when he resumed private practice. His accomplishments during this period were notable. He was successful in the innovation of newer methods and the promotion of research. He was a gifted teacher and trained many residents who have carried his precept and example throughout Kentucky and beyond. The Department of Surgery was elevated to a very high level of performance under his chairmanship.

When J. Murray Kinsman, M.D., succeeded to the deanship in 1949 to 1963, we felt that he was the logical successor to our beloved John Walker Moore, M.D. He too left a successful practice in internal medicine to undertake the gruelling but less remunerative full-time job in the academic field. He performed magnificently in a very difficult and changing post-war period and prepared the way for the realization of our splendid new facilities which were carried to completion by his successor Donn Smith, M.D. There will continue to be a

much higher level of education to more physicians and dentists which Kentucky has so badly needed. And during the same time his prestige and leadership became national in medical education and in his elevation to Master and Vice-President of the American College of Physicians. He was Vice-President of University of Louisville from 1963 to 1966, when he resumed private practice.

These men have gone the second mile. Achieving notable success in the career they had elected to pursue, they were chosen to devote full-time to teaching; which, incidentally, we must regard as the most crucial and exacting branch of medicine. It has meant a sacrifice of the freedom, security, and sometimes leisure to which they had become accustomed. They sought to fulfil that less familiar part of the Hippocratic Oath which says, "to teach them this Art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of medicine, but to none others."

We admire and honor these, our colleagues, for their unselfish contributions to medicine and most earnestly wish Doctor VonderHaar the continuation of achievements in his new field that he has known heretofore.

Sam A. Overstreet, M.D.

ORGANIZATION SECTION

U. S. Senator Bennett Accepts Invitation . . .

Medical Foundations and Health Care Costs to Be Featured Subjects at 1972 KMA Interim Meeting, April 13-14

Officials of the Kentucky Medical Association are most pleased that Senator Wallace F. Bennett (R-Utah) will be appearing on the KMA Interim Meeting program. Senator Bennett is the author of the famous "Bennett Amendment," which would create a Professional Standards Review Organization (PSRO) as a part of a National Health Insurance program. This act has been a major piece of legislation in the U. S. Congress the past couple of years, and KMA members will have an opportunity to hear the details of this far-reaching legislation first-hand.



Senator Bennett

The KMA Interim Meeting, to be held at the Holiday Inn, Somerset, with registration beginning at 8:00 am on April 13, will primarily feature informative discussions on Medical Foundations and Health Care Costs.

After opening remarks by John S. Harter, M.D., Louisville, President of KMA, the meeting will begin with a talk by Mr. Joe D. Miller, Chicago, Assistant Executive Vice-President, American Medical Association, on The Medical Foundation Concept.

A panel discussion on the Kentucky Foundation for Medical Care, Inc., will follow at 10:00 am. Moderated by Henry B. Asman, M.D., Louisville, President of KFMC, this discussion will include remarks by Doctor Asman on the History and Priorities of the Foundation. Carl A. Hoffman, M.D., Huntington, West Virginia, President-Elect of AMA, will present a report on liability insurance; and a progress report on utilization review will be summarized by Marvin A. Bowers, Jr., M.D., Chairman, KFMC Claims and Utilization Review Committee.

As stated above, the outstanding feature on Thursday evening will be Senator Bennett discussing the "Professional Standards Review Organization." Another highlight will be the presentation of the Faculty Scientific Awards, which for the first time this year will be made at the Interim Meeting instead of the Annual Meeting.

Friday morning's session will begin with opening remarks by Lee C. Hess, M.D., Florence, President-Elect of KMA. Following Doctor Hess will be Doctor Hoffman's version of "What's Happening in Health Care"; Mr. Frank J. Groschelle, Regional Director, HEW-Atlanta Office, discussing, "HEW's View of the Health Care Industry"; and Mr. Jeffery Cohelan, Washington, D.C., Executive Director, Group Health Associaion of America, Inc., presenting, "The Significance of a Prepaid Group Practice in the 70's."

At 10:30 am on Friday, a panel will exchange ideas on "Approaches to Rising Cost of Health Care." Moderated by Doctor Hess, this discussion will feature the findings of the recent Kentucky Chamber of Commerce state-wide forums. Participants will be Mr. John M. Lewis, Des Moines, President, Iowa Utility Association (past Executive Vice-President of the Kentucky Chamber of Commerce); Mr. Groschelle; Mr. Hasty W. Riddle, Louisville, Executive Vice-President, Kentucky Hospital Association; Mr. Mead B. Ferris, Louisville, General Personnel Manager, South Central Bell; and William P. McElwain, M.D., Frankfort, Commissioner, State Department of Health.

Question and answer sessions will be held both days. Time has also been set aside for use of the recreational facilities of the Somerset area. Special activities are being planned for all of the members of your family.

Kentucky physicians are urged by Doctor Harter to attend the Interim Meeting and bring their families. The deadline for making a reservation at the Holiday Inn in Somerset is April 1. A reservation form can be found on page 227 of this *Journal* for your convenience.

Nominations to Be Accepted

The KMA Nominating Committee will accept nominations for KMA officers for the 1972-73 Association year at the 1972 Interim Meeting. A special table will be reserved during the dinner session on Thursday evening, April 13, at which your nominations will be accepted. You are urged by the members of the committee to visit the table and make your feelings known on this subject.



Doctor Harter

Program

"You Are Involved — Changes and Challenges"

KMA 1972 Interim Meeting

April 13 and 14

Holiday Inn

Somerset



Mr. Miller

THURSDAY MORNING SESSION
April 13

John S. Harter, M.D., Louisville, President,

Kentucky Medical Association, Presiding

(All times are Eastern Standard Time)

8:00 a.m. **Registration**

9:30 a.m. **Call to Order**—Doctor Harter

9:35 a.m. **"The Medical Foundation Concept"**—Joe D. Miller, Chicago, Assistant Executive Vice-President, American Medical Association

10:00 a.m. **Panel Discussion—"Kentucky Foundation for Medical Care, Inc."** Henry B. Asman, M.D., Louisville, Moderator, President, Kentucky Foundation for Medical Care, Inc.

History and Priorities—Doctor Asman

Liability Insurance—Carl A. Hoffman, M.D., Huntington, West Virginia, President-Elect, American Medical Association

A Progress Report on Utilization Review—Marvin A. Bowers, M.D., Louisville, Chairman, KFMC Claims and Utilization Review Committee

10:45 a.m. **Coffee Break**

11:00 a.m. **"Blue Shield's Health Care Role Today"**—Ira C. Layton, M.D., Kansas City, Missouri, Chairman, National Association of Blue Shield Plans Board

11:30 a.m. **Question and Answer Session for Morning Program**

12:00 noon **Adjourn Morning Session**

Afternoon Free



Doctor Asman



Doctor Hoffman



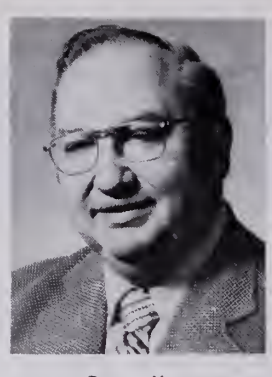
Doctor Bowers



Doctor Layton



Doctor Cantrill



Doctor Hess



Mr. Groschelle



Mr. Cohelan

THURSDAY EVENING SESSION

April 13

6:00 p.m. **Social Hour**—Hosted by the Pulaski County Medical Society

6:45 p.m. **Dinner**—Invocation by James C. Cantrill, M.D., Georgetown, KMA Trustee, Ninth District

7:45 p.m. **"Professional Standards Review Organization"**—
Senator Wallace F. Bennett (R-Utah)
Member, U.S. Senate

FRIDAY MORNING

April 14

Lee C. Hess, M.D., Florence, President-Elect,
Kentucky Medical Association, Presiding

9:00 a.m. **Call to Order**—Doctor Hess

9:05 a.m. **"What's Happening in Health Care Costs"**—Doctor Hoffman

9:25 a.m. **"HEW's View of the Health Care Industry"**—Frank J. Groschelle, Regional Director, HEW—Atlanta Office

9:50 a.m. **"The Significance of a Prepaid Group Practice in the 70's"**—
Jeffery Cohelan, Washington, D.C.,
Executive Director, Group Health Association of America, Inc.

10:15 a.m. **Coffee Break**

10:30 a.m. **Panel Discussion—"Approaches to Rising Cost of Health Care"**
Doctor Hess, Moderator

Summary of Chamber of Commerce Tour—John M. Lewis, Des Moines, President, Iowa Utility Association

Comments by:

Government—Mr. Groschelle

A Hospital Executive—Hasty W. Riddle, Louisville, Executive Vice-President, Kentucky Hospital Association

A Consumer—Mead B. Ferris, Louisville, General Personnel Manager, South Central Bell

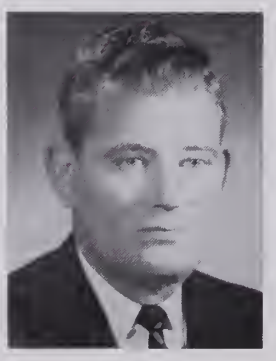
Health Planners—William P. McElwain, M.D., Frankfort, Commissioner, State Department of Health

11:45 a.m **Question and Answer Session for Morning Program**

12:30 p.m. **Closing Remarks**—Doctor Harter



Mr. Lewis



Mr. Riddle



Mr. Ferris



Doctor McElwain

Symposium Scheduled On Oral Cancer

The Department of Surgery of the University of Louisville School of Medicine and the School of Dentistry will hold a one-day symposium, Saturday, April 22, in the Auditorium of the Health Sciences Center of the University.

Four leaders in the field of cancer will discuss, "Latest Approaches to Treatment of Oropharyngeal Cancer." Leading the discussion will be: Will D. Hammond, M.D., Clinical Center, Surgery Branch, National Institutes of Health, Bethesda, Maryland; Alfred S. Ketcham, M. D., Chief, Clinical Center, National Institutes of Health, Bethesda; James Lepley, M. D., Department of Maxillofacial Prosthetics, Head and Neck Service, Memorial Center, New York; and Robert Lindberg, M. D., Department of Radiotherapy, M. D. Anderson Hospital and Tumor Institute, University of Texas in Houston.

The Symposium is open to all physicians, dentists, house staff physicians, and medical and dental students. Five hours of credit has been requested from the American Academy of Family Physicians, Kentucky Chapter. Five points of continuing education credit will be awarded by the Kentucky Board of Dentistry for 1973 Relicensure.

Ky. Chapter, ACS Plans Meeting April 6-8 in Lexington

The Kentucky Chapter of the American College of Surgeons is holding its annual spring meeting at the Ramada Imperial in Lexington, April 6-8.

Branham B. Baughman, M.D., Frankfort, President of the Kentucky Chapter, has announced that the guest speakers for the meeting will include W. Dean Warren, M.D., Chairman and Professor of Surgery, Emory University, Atlanta; and George Bloch, Professor of Surgery, University of Chicago.

Ward Griffen, M.D., Lexington, is the Chairman of the Scientific Program Committee of the Kentucky Chapter, ACS.

AMPAC Bd. of Directors Re-Elect Dr. Gardner as Chairman

The Board of Directors of the American Medical Political Action Committee re-elected Hoyt D. Gardner, M.D., Louisville, to a second term as Chairman at AMPAC's annual meeting held January 19-22 in Phoenix, Arizona.

Doctor Gardner, who was also recently appointed to the AMA Council on Legislation, is most vitally interested in physician participation in political affairs. In a report to the AMA House of Delegates at its Clinical Convention, November 28-December 1, Doctor Gardner told of the "unqualified success" that AMPAC has met with in its 10-year history.

A general surgeon, he has served on numerous KMA and Jefferson County Medical Society committees. He is presently the Chairman for National Affairs, KMA Committee on Legislative Activities, and is on the Association's Building Committee. In 1966-67, Doctor Gardner was President of the Jefferson County Medical Society.

Doctor Gardner has been active in student medical affairs and serves as a part-time instructor in Medical Civics at the University of Louisville Medical School. He has worked for the improvement of health care facilities for Louisville and Jefferson County as former President of the City-County Board of Health and on the state level as a member of the Kentucky Comprehensive Health Planning Council.

Ky. Pediatricians to Hold Meeting, May 3-4

The Kentucky Chapter, American Academy of Pediatrics will hold a spring meeting on May 3-4 at Lake Barkley, recently announced Noble T. MacFarlane, Jr., M.D., Lexington, State Chairman of the organization.

The program planned for the two-day meeting includes: Earl E. Vastbinder, M.D., University of Kentucky Medical Center, speaking on "Obesity"; Robert M. Blizzard, M.D., Johns Hopkins Hospital, Baltimore, on "Growth Hormones"; and Donald Pinkel, M.D., Memphis, on "Management of Leukemia and Lymphomas."

A round table discussion on preceptorships is also scheduled.

Dr. Norman Blank to Speak At Radiologist's Meeting

Norman Blank, M.D. Stanford, will be the featured speaker at the spring meeting of the Kentucky Chapter, American College of Radiology, according to Ralph C. Quillin, M.D., Lexington, President of the chapter.

To be held April 13 at the Ramada Imperial Inn, Lexington, the meeting will begin at 6:30 pm.

Doctor Blank, with the Department of Radiology, Stanford University Medical Center, Stanford, Calif., will speak on, "The X-ray Diagnosis of Mediastinal Lesions."

Are You Qualified to Vote May 23?

In order to vote in the May 23 primary election, you must be properly registered by March 25, according to William W. Hall, M.D., Owensboro, Chairman of the KMA Committee on Legislative Activities for State Affairs.

Doctor Hall urges all members, their families, and staffs to qualify and vote in the May 23 primary. If there has been any change in your status, you should check to see if you must register, the KMA Chairman said.

AMPAC Workshop Is Planned For March 11-12

The 1972 AMA-AMPAC Public Affairs Workshop will be held March 11 and 12 at the Washington-Hilton Hotel, Washington, D.C., recently announced Hoyt D. Gardner, M.D., Louisville, Chairman of the Board of the American Medical Political Action Committee.

"This year is an urgent one in terms of politics and legislation. In November, we are faced with the election of men and women who will be responsible for major legislative decisions. The 1972 AMA-AMPAC Public Affairs Workshop will explore, in detail, where we are now, and where we are going in terms of this political and legislative urgency. The workshop will present programs to respond to your needs for information and communication tools in relation to the tasks ahead. Key Congressional speakers and outside political and legislative experts will address themselves to some of the projects for 1972," says Doctor Gardner.

Also included in the plans for the workshop are a special "Early Bird Reception" and pre-registration at the John F. Kennedy Center for Performing Arts on March 10.

Fred C. Rainey, M.D., Elizabethtown, Chairman of KEMPAC, expects several representatives of the KEMPAC Board to attend the meeting.

Dr. VonderHaar Is to Head U-L Family Practice Dept.

William P. VonderHaar, M.D., was recently selected Chairman of the new Department of Family Practice to be established at the University of Louisville School of Medicine.

Doctor VonderHaar, one of the first Louisville general practitioners to specialize in family practice, has been active in the Kentucky and American Academy of Family Physicians and in the Jefferson County Medical Society. He has served KMA on the Committee of Educational Television for several years.

A University of Kentucky committee is still trying to find a chairman for the college's proposed Department of Family Practice.

The 1970 General Assembly passed a law requiring the two medical schools to set up the departments, but did not provide the funds for doing so. The schools are now asking the State for about $275,000 for each school to finance the departments.

Nurse Practitioner in 70's to Be Theme of League Meeting

"The Role of the Nurse Practitioner in the '70's" is the theme of the Kentucky League for Nursing Annual Convention, to be held April 13-14 in Murray.

Highlights of the two-day program will include panel discussions on this subject and a banquet Thursday evening featuring Ann Kibrick, R.N., President of the National League for Nursing, as keynote speaker.

The Friday morning panel, to discuss the role of the nurse practitioner, will be made up of Ralph J. Cazort, M.D., Dean, School of Medicine, Meharry Medical College, Nashville; Mr. Judge Calton, Administrator, University Hospital, Lexington; and Mr. Carroll Holmes, Regional Community Coordinator, Barron River Mental Health-Mental Retardation Board. Gladys C. Batliner, R. N., Director of Nurses, Children's Hospital, Louisville, will be moderator.

A second panel and the general audience will hold a discussion on the same subject Friday afternoon. Mrs. Hoyt Gardner, Coordinator of Women's Activities for KMA, will be a participant on the panel.

Dr. William R. Hourigan, President, Kentucky League for Nursing, has announced that other features of the convention are a tour of the Murray State University campus, a business meeting, and a meeting of the Board of Directors and Committee Chairmen of the League.

Socioeconomic Meet to Be Held By AMA in Fort Lauderdale

"Health Service in the '70's" will be the theme of the Sixth National Congress on the Socioeconomics of Health Care, to be held in Fort Lauderdale, Florida, April 6-8.

Sponsored by the Council on Medical Service of the American Medical Association, the three-day Congress is expected to attract 600 physicians and other authorities in the field of health care services. Daily sessions are planned from 8:30 am until 1 pm.

Among those scheduled to address the Congress are: Ira C. Layton, M.D., Chairman of the Board, National Association of Blue Shield Plans; Merlin K. DuVal, Jr., M.D., Assistant Secretary of HEW for Health and Scientific Affairs; Ernest W. Saward, M.D., President, Group Health Association of America; Russell B. Roth, M.D., Speaker of AMA's House of Delegates; Mrs. Helen Nelson, Vice-President, Consumers' Federation of America; and Max H. Parrott, M.D., Chairman of the AMA Board of Trustees.

Awards Nominations Accepted At the KMA Office

The KMA Awards Committee is now accepting nominations for the Kentucky Medical Association Award and the Distinguished Service Award, according to Douglas E. Scott, M.D., Lexington, Chairman of the committee.

The KMA Award is designed to honor an outstanding layman, and the Distinguished Service Award honors the outstanding physician of the year. They are presented each year at the President's Luncheon held during the Annual Meeting.

Nominations for these awards should be forwarded to the KMA Office, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205, and marked, "Attention: Awards Committee."

KIMA to Hold Annual Meeting April 6 in Louisville



Doctor Kelley



Doctor Block

The Kentucky Industrial Medical Association will hold its annual meeting on April 6 at the Ford Motor Company Kentucky Truck Plant in Louisville.

The program will include talks on, "Physical Medicine and Rehabilitation," by Thomas A. Kelley, Jr., M.D., Director of the Rehabilitation Center, Louisville; and "Prevention of Escalating Medical Costs," by Avil McKinney, Vice-President, Kentucky Blue Cross and Blue Shield; and a tour of the Ford plant.

The dinner speaker for the meeting will be Duane L. Block, M.D., Medical Director of the Ford Motor Company, Detroit. His topic will be, "Establishing Rapport Between Industrial and Private Physicians."

Registration will begin at 2:00 p.m.

Antiques Fair to Be Sponsored By Fayette Co. Auxiliary

The Fayette County Medical Auxiliary Antiques Fair will be held May 16-18 in the Floral Hall at the Lexington Trotting Track. An annual affair held to raise money for health careers scholarships, the Antique Fair is Kentucky's only show and sale by selected dealers of exclusively pre-1830's furnishings.

Special attractions of the Fair are: the room-style booths set up in Floral Hall, an old carriage house; a Preview Party, held May 15 from 6:00 to 10:00 pm; a lecture given by Joseph T. Butler, curator of the Sleepy Hollow Restoration in Tarrytown, New York; a display from the Ephraim McDowell House, KMA-owned shrine of the famous Danville physician; and the collection of medical antiques of Peter Bosomworth, M. D., Vice-President of the University of Kentucky Medical Center.

The Co-Chairmen of the Fair are Mrs. James Rich and Mrs. Peter Bosomworth; Preview Party, Mrs. George Gumbert; and tickets, Mrs. Joseph Hamburg.

The proceeds from past Antiques Fairs sponsored by the Fayette County Medical Auxiliary have made it possible for the organization to finance the education of students in the health careers field. The organization is now paying full tuition for 13 nursing and allied health students at Lexington hospitals, Kentucky Hospital School of Nursing in Louisville, and the University of Kentucky.

Key Man Orientation Conference Held January 5 in Frankfort

Forty Key Men and Women braved the ice and snow to attend the Key Man Orientation Conference held in Frankfort on January 5, 1972. The Conference was chaired by John P. Stewart, M.D., Frankfort, a member of the KMA Committee on Legislative Activities.

The National Affairs portion of the program was presented by Hoyt D. Gardner, M.D., Louisville, Chairman for National Affairs of the KMA Committee on Legislative Activities and a member of the AMA Council on Legislation.

Lieutenant Governor Julian M. Carroll was the guest speaker for the State Affairs portion of the program. Throughout the meeting, it was emphasized that a successful Key Man operation would do much to assist in passing good health legislation in the best interest of the public.

Initial registration approximated 80, with many being unable to attend because of weather problems.

NEWS ITEMS

George F. Brockman, III, M.D., Greenville, has been elected a Fellow of the Society for Advanced Medical Systems. Doctor Brockman is Chairman of the KMA Ad Hoc Committee on Electronic Data Processing and of the HMO Feasibility Study of the Pennyrile Medical Society.

Murphy H. Green, M.D., has joined Robert Kinnaird, Jr., M.D., and Walter R. Brewer, M.D., in the practice of urology in Lexington. Doctor Green graduated from Vanderbilt University School of Medicine, Nashville; and interned and served his residency at the Indiana University Hospitals, Indianapolis.

Larry J. Hall, M.D., has begun the practice of otholaryngology in Elizabethtown. He attended Vanderbilt University School of Medicine, Nashville; interned at Butterworth Hospital, Grand Rapids, Mich.; and served his residency at Emory University School of Medicine, Atlanta.

Tom D. Nichol, D.D.S, M.D., is now practicing with John J. Wolfe, M.D. A specialist in plastic and reconstructive surgery, Doctor Nichol graduated from the University of Tennessee College of Medicine, interned at the University of Tennessee Memorial Research Center and Hospital, and served residencies at the University of Tennessee (general surgery) and Duke University (plastic surgery).

Digest of Board of Trustees Minutes
December 9, 1971

The second regular session of the KMA Board of Trustees was held on December 9, 1971, at the Headquarters Office. The President's Report, Headquarters Office Report, and Report of the Delegates to the AMA were accepted for information.

Action on committee activities included:

- Instructing the Educational Television Committee and Medical Education Committee to work together on a recommendation to the Board concerning specific continuing education programs;
- Approving the conducting of a Seminar on Emergency Crises by the Medicine and Religion Committee;
- Approving a project for the KMA Hospital Committee and the Kentucky Hospital Assciation offering the visit of a qualified team to assist hospital-based extended care facilities as to their proper use;
- Authorizing a seminar for emergency department nurses to be held on April 28-29 and co-sponsored by the Trauma Committee, American College of Surgeons, and KMA's Disaster Medical Care Committee; and
- Requesting the State's two medical schools to form an elective course in the treatment of athletes as urged by the School Health Committee.



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With the Kentucky General Assembly scheduled to convene shortly, legislative proposals reviewed and action taken upon them were in the areas of medical licensure, health department boards, statute of limitations, peer review liability, healing arts accreditation, hospital governing boards, generic drugs, smallpox, and a proposed bill acknowledging that blood is a service.

Henry B. Asman, M.D., Louisville, President of the Kentucky Foundation for Medical Care, Inc., presented a summary of the actions taken by the Foundation Board members at their November 4 organizational meeting. He pointed out that the Foundation had appointed a number of committees and, with KMA Board approval, some committees of KMA were transferred to the Foundation.

Carl Cooper, Jr., M.D., Bedford, and Harvey A. Page, M.D., Pikeville, were appointed to the KEMPAC Board; and nominees were approved for submission to the Governor for an appointment to the State Board of Health.

Other actions taken during the meeting were to:

- Exhibit at the Kentucky State Fair;
- Provide KMA members with auto decals;
- Reaffirm policy limiting PRN refills to five or not to exceed a time limit of six months;
- Request David A. Hull, M.D.; Lee C. Hess, M.D.; and Paul J. Parks, M.D., to serve as an ad hoc committee to study and make recommendations concerning the future of the Rural Kentucky Medical Scholarship Fund;
- Authorize appointment of Douglas H. Jenkins, M.D.; W. Bruce Hamilton, M.D.; and Doctor Hess to work with representatives of the Kentucky Bar Association for the purpose of jointly sponsoring with KMA a seminar on abortion;
- Receive a report on the KMA Orientation Program to include some suggested changes in the format;
- Authorize appointment of a special committee to meet with third party carriers to discuss the best methods of implementing Resolution H (Third Party Payment Plans) for the purpose of making a recommendation at the next meeting of the Board; and
- Appoint a committee of the KMA Delegates and Alternate Delegates to the AMA for studying means of promoting the value of and increasing membership in the American Medical Association.

The date of the next Board meeting was set for April 12 at the Somerset Holiday Inn.

Anesthesiologists Elect Officers

Richard B. Salsitz, M.D., Louisville, was recently elected President of the Kentucky Society of Anesthesiologists. Lila H. Carter, M.D., Louisville, was elected Secretary-Treasurer.

In Memoriam

WENDELL F. HURT, M.D.
Tompkinsville
1928-1972

Wendell F. Hurt, M.D., a Tompkinsville physician, died in Nashville Tenn., on January 29. A 1953 graduate of the University of Louisville School of Medicine, Doctor Hurt was a member of the Monroe County Medical Society and the Kentucky and American Medical Associations.

C. DWIGHT TOWNES, M.D.
Louisville
1899-1972

C. Dwight Townes, M.D., one of the men most instrumental in the planning and construction of the Kentucky Lions Eye Research Institute, died January 22 in Louisville. A native of Beech Grove, Doctor Townes grew up in Madisonville and graduated from the University of Louisville School of Medicine in 1924. He served his residency in ophthalmology at the Brooklyn Eye and Ear Infirmary. He became Chairman of the Department of Ophthalmology at the University of Louisville in 1941 and retired as Professor Emeritus in 1965. He was a member of the American Ophthalmological Society, the American Academy of Ophthalmology, the American College of Surgeons, the Jefferson County Medical Society, and the Kentucky and American Medical Associations.



KMGA Plans Fall Tournament for September 21

The annual fall tournament of Kentucky Medical Golf Association will be held at Harmony Landing Country Club on Thursday, September 21, 1972.

Jim Telfer, M.D., Editor of Rx *Sports and Travel,* regrets that technical difficulties in processing of the film of the 1971 tournament rendered all photographs useless for publication.

Any physician interested in joining KMGA should complete the following form:

MEMBERSHIP APPLICATION

To: Kentucky Medical Golf Association
Donald L. Ware, M.D., Secretary-Treasurer
750 Medical Towers South
Louisville, Kentucky 40202

Date _____

Gentlemen:

Please enroll me as a member of KMGA. I hereby agree to abide by the charter and by-laws as printed.

Enclosed is my check for $10.00 to cover enrollment fee of $5.00 and annual dues of $5.00 for 1972.

(Make check payable to Kentucky Medical Golf Association.)

Name _____ M.D. Date of Birth _____

Address _____ Club Affiliation _____

_____ Zip Code Current Handicap _____

County Medical Societies List Officers for 1972

The following lists of officers and delegates of county societies for 1972 have been received by the KMA membership department.

Barren

President: Russell Starr, M.D., Glasgow
Vice-President: George McKinley, M.D., Glasgow
Secretary-Treasurer: Lewis Dickinson, M.D., Glasgow
Delegate to KMA: Daryl P. Harvey, M.D., Glasgow
Alternate Delegate: Robert McKinley, M.D., Glasgow

Bell

President: Stelio Imprescia, M.D., Harlan
Vice-President: Robert Matheny, M.D., Middlesboro
Secretary-Treasurer: D. D. Life, M.D., Beverly
Delegates to KMA:
Emanuel Rader, M.D., Pineville
Francis Forde, M.D., Middlesboro
Alternate Delegates:
Kenneth Smith, M.D., Middlesboro
Philip Padgett, M.D., Middlesboro

Boyle

President: Rob P. Kirkpatrick, M.D., Danville
Vice-President: D. LaMar Keiser, D.D.S., Danville
Secretary-Treasurer: Harry G. Caldwell, M.D., Danville
Delegate to KMA: John M. Baird, M.D., Danville
Alternate Delegate: William Mack Jackson, M.D., Danville

Breckinridge

President: James G. Sills, M.D., Hardinsburg
Vice-President: Robert B. Chambliss, M.D., Hardinsburg
President-Elect: Earl S. Buchele, M.D., Cloverport
Treasurer: Harold W. Owens, M.D., Irvington
Secretary: William D. Hatfield, M.D., Irvington
Delegate to KMA: James G. Sills, M.D., Hardinsburg
Alternate Delegate: William D. Hatfield, M.D., Irvington

Campbell-Kenton

President: Robert W. O'Connor, M.D., Newport
Vice-President: G. T. Donovan, M.D., Erlanger
President-Elect: Richard J. Menke, M.D., Covington
Secretary-Treasurer: Donald M. Stevens, M.D., Highland Heights
Delegates to KMA:
Raymond J. Timmerman, M.D., Newport
Thomas Huth, M.D., Covington
Alfred A. Jacobs, M.D., Erlanger
Jerry Sutkamp, M.D., Bellevue
Robert E. Smith, M.D., Covington
Alternate Delegate:
W. V. Pierce, M.D., Covington

Fayette

President: James B. Holloway, Jr., M.D., Lexington
Vice-President: John E. Trevey, M.D., Lexington
President-Elect: James G. Wilhite, M.D., Lexington
Secretary-Treasurer: John R. Cole, M.D., Lexington
Delegates to KMA:
(All of Lexington)
James B. Holloway, Jr., M.D.
James G. Wilhite, M.D.
Leslie W. Blakey, M.D.
W. Porter Mayo, M.D.
John E. Trevey, M.D.
Ted D. Ballard, M.D.
Richard D. Floyd, M.D.
Richard F. Hench, M.D.
Winston L. Burke, M.D.
Carl H. Scott, M.D.
John F. Berry, Jr., M.D.
Peter P. Bosomworth, M.D.
T. R. Bryant, Jr., M.D.
Richard B. McElvein, M.D.
Alternates:
Walter Brewer, M.D.
Ward O. Griffen, M.D.
Karl Kelty, M.D.
Charles H. Nicholson, M.D.
Ben C. Stigall, M.D.

Johnson

President: Glenn R. Powell, M.D., Paintsville
Vice-President: Jerry D. Fraim, M.D., Paintsville
Secretary-Treasurer: Maurice M. Hall, M.D., Paintsville
Delegate to KMA: Franklin K. Belhasen, M.D., Paintsville
Alternate Delegate: Jerry D. Fraim, M.D., Paintsville

Knox

President: Wilburn P. Clifton, M.D., Barbourville
Vice-President: Raymond E. Hayden, M.D., Barbourville
Secretary-Treasurer: Harold L. Bushey, M.D., Barbourville
Delegate to KMA: Harold L. Bushey, M.D., Barbourville
Alternate: Raymond E. Hayden, M.D., Barbourville

McCracken

President: William H. Smith, M.D., Paducah
Vice-President: Winfield Stryker, M.D., Paducah
Secretary-Treasurer: Frank B. Crawford, Jr., M.D., Paducah

(Continued on next page)

County Society Officers *(Continued from page 226)*

Delegates to KMA:
James Seabury, M.D., Paducah
Norman Parrott, M.D., Paducah
Walter Johnson, M.D., Paducah
Alternates:
David Leeper, M.D., Symsonia
Burton Haley, M.D., Paducah

Mercer

President: Ralph T. Ballard, M.D., Harrodsburg
Vice-President: Bacon R. Moore, III, M.D., Harrodsburg
Secretary-Treasurer: Ellsworth H. John, M.D., Harrodsburg
Delegate to KMA: John S. Baughman, III, M.D., Harrodsburg
Alternate Delegate: Bacon R. Moore, III, M.D., Harrodsburg

Nelson

President: Kenneth L. Stinnette, M.D., Bardstown
Vice-President: Tyre G. Forsee, M.D., Bardstown
Secretary-Treasurer: John J. Sonne, M.D., Bardstown
Delegate to KMA: Emmett W. Wood, M.D., Bardstown
Alternate Delegate: Tyre G. Forsee, M.D., Bardstown

Pennyrile

President: James S. Brashear, M.D., Central City
Vice-President: Ralph L. Cash, M.D., Princeton
Secretary-Treasurer: Jules J. McNerney, M.D., Hopkinsville
Delegates to KMA:
Joseph Stokes, M. D., Central City
Henry Bell, M. D., Elkton
Nathaniel Talley, M. D., Princeton
Ben Crowder, M. D., Hopkinsville
Frank Pitzer, M. D., Hopkinsville
William N. Richardson, M. D., Cadiz

(Continued on next page)

KENTUCKY MEDICAL ASSOCIATION
INTERIM MEETING, APRIL 13-14, 1972
REQUEST FOR ACCOMMODATIONS RESERVATION

Complete and mail directly to Holiday Inn of Somerset.

☐ NUMBER OF NIGHTS ☐ 6 PM ☐ 4 PM ☐ GUARANTEED

☐ 1 ROOM, 1 BED
☐ 1 ROOM, 2 BEDS
☐ 2 ROOMS, 1 BED
☐ 2 ROOMS, 2 BEDS
☐ 2 ROOMS, 1 & 2 BEDS

RESERVATIONS SHOULD BE MADE
NO LATER THAN APRIL 1, 1972

Names of those sharing accommodations:

Name_____

Name_____

Name_____

Address to which confirmation to be sent: _____
Street Address

_____
City State Zip Code

Return reservation request to: Holiday Inn of Somerset, P.O. Box 738, Somerset, Kentucky 42501; telephone (606) 678-8115.

Note: This reservation is for the Kentucky Medical Association meeting, April 13-14, 1972.

County Society Officers *(Continued from page 227)*

Perry

President: Cordell H. Williams, M.D., Hazard
Vice-President: Harold Redd, Jr., M.D., Hazard
Secretary-Treasurer: Charles C. Rutledge, M.D., Hazard
Delegate to KMA: Donald L. Martin, M.D., Ary
Alternate: Keith Cameron, M.D., Ary

Powell

President: John Knox, M.D., Stanton
Vice-President: Charles Noss, M.D., Stanton
Secretary-Treasurer: Charles Noss, M.D., Stanton
Delegate to KMA: Sam Cecil, M.D., Stanton
Alternate Delegate: Charles Noss, M.D., Stanton

Pulaski

President: G. A. Weigel, M.D., Somerset
Vice-President: Patrick Jasper, M.D., Somerset
Secretary-Treasurer: Danny M. Clark, M.D., Somerset
Delegate to KMA: J. Roy Biggs, M.D., Somerset
W. O. Massey, M.D., Burnside
Alternate Delegate: Michael D. Thomas, M.D., Somerset
Danny M. Clark, M.D., Somerset

Warren, Edmonson, Butler

President: Nelson B. Rue, M.D., Bowling Green
Vice-President: Jerry W. Martin, M.D., Bowling Green
Treasurer: William G. Begley, M.D., Bowling Green
Secretary: William P. Stone, Jr., M.D., Bowling Green
Delegates to KMA: James O. Willoughby, M.D., Bowling Green
Harold Keen, M.D., Bowling Green
Keith M. Coverdale, M.D., Bowling Green
Alternate Delegates: Nelson B. Rue, M.D., Bowling Green
V. L. Fisher, Jr., M.D., Bowling Green
Carroll C. Brooks, M.D., Bowling Green

Johan Jensen, M.D., is now practicing in Louisville with George I. Uhde, M.D., and Samuel L. Cooper, D.D.S., M.D. Doctor Jensen graduated from the University of Texas Southwestern Medical School, Dallas, in 1962 and interned and served his residency at the University of Louisville Affiliated Hospitals. After serving in the U.S. Navy, he practiced otolaryngology in Redlands and Fontana, Calif.

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Nourishment Campbell's Soups contain selected meats and sea foods, best garden vegetables—carefully processed to help retain their natural flavors and nutritive values.

Convenience Within 4 minutes a bowl of delicious soup is heated and ready to eat.

Economy Campbell's Soups are inexpensive—an important consideration to those whose budgets are limited.

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Break the ulcer circuit to hyperacidity, hypermotility and ulcer pain.



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A Relief Factor in Peptic Ulcer

Worry, frustration, job pressure—all set up excessive vagal currents in patients with peptic ulcer.

Pro-Banthine "insulates" the stomach, the duodenum and the lower intestinal tract—the sites where these destructive currents take their toll.

This "insulation" helps block excessive enteric activity and acidity, thus helping to provide the proper environment for the healing of peptic ulcers.

It's nice to know that Pro-Banthine provides this protection at a dosage that causes little or no discomfort and that, unlike ataractic agents, Pro-Banthine does not cloud the patient's awareness or thought processes.

By moderating excessive vagal currents Pro-Banthine relieves spasm, acid burn and pain. By reducing gastric motility Pro-Banthine also prolongs the activity of antacids.

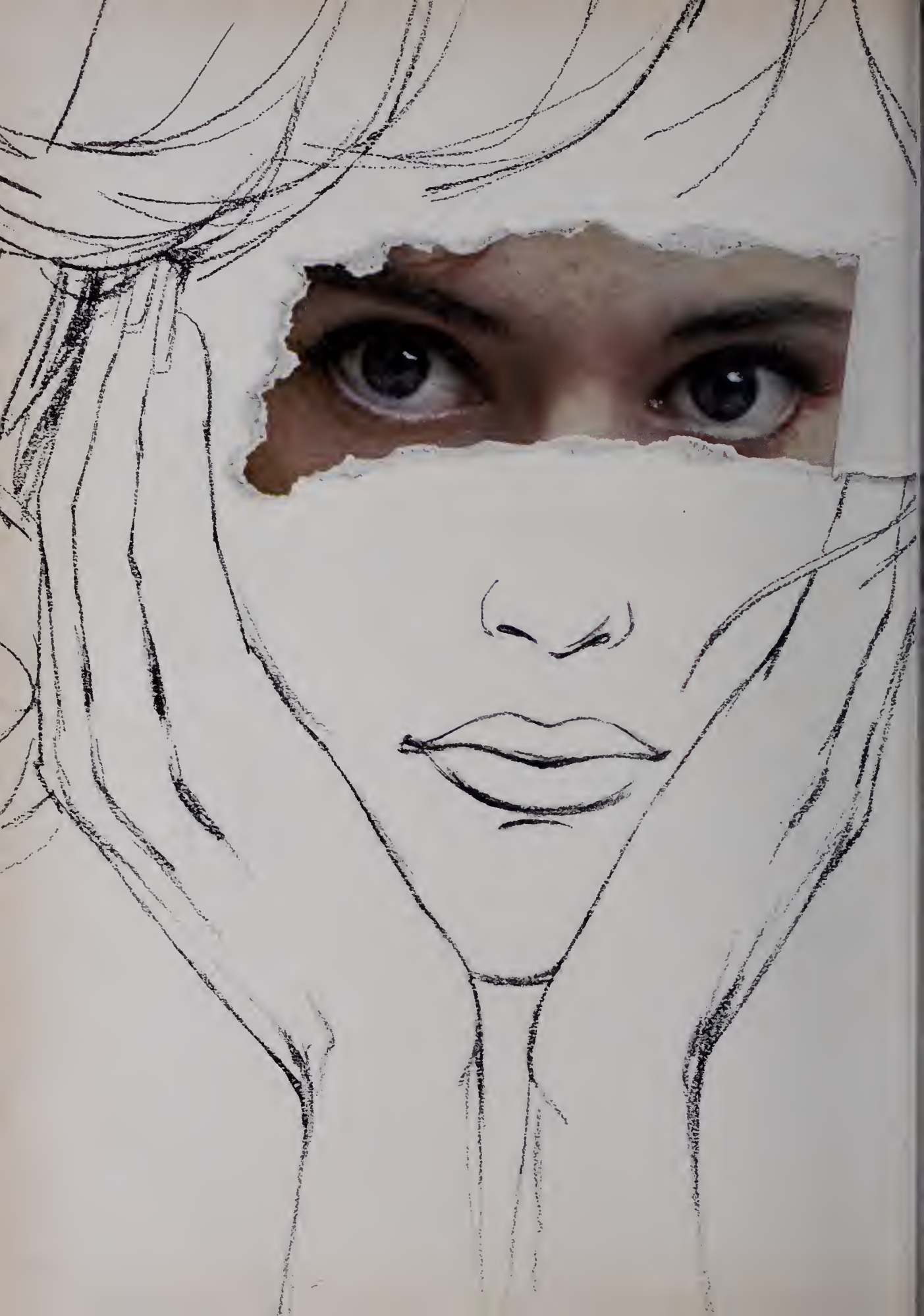
Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.
Contraindications: Glaucoma, severe cardiac disease.
Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

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when reassurance is not enough

Indications: Relief of anxiety and tension; adjunctively in various disease states in which anxiety and tension are manifested; and to promote sleep in anxious, tense patients.

Contraindications: Acute intermittent porphyria and allergic or idiosyncratic reactions to meprobamate or related compounds such as carisoprodol, mebutamate, tybamate, carbromal.

Warnings: *Drug Dependence:* Physical and psychological dependence and abuse have occurred. Chronic intoxication, from prolonged use and usually greater than recommended doses, leads to ataxia, slurred speech, vertigo. Carefully supervise dose and amounts prescribed, and avoid prolonged use, especially in alcoholics and addiction-prone persons. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis; rarely convulsive seizures, more likely in persons with CNS damage or pre-existent or latent convulsive disorders). Therefore, reduce dosage gradually (1-2 weeks) or substitute a short-acting barbiturate, than gradually withdraw. *Potentially Hazardous Tasks:* Driving a motor vehicle or operating machinery. *Additive Effects:* Possible additive effects between meprobamate, alcohol, and other CNS depressants or psychotropic drugs. *Pregnancy and Lactation:* Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers, or women of childbearing potential. Animal data at five times the maximum recommended human dose show reduction in litter size due to resorption. Meprobamate appears in umbilical cord blood at or near maternal plasma levels, and in breast milk at levels 2-4 times that of maternal plasma. *Children Under Six:* Drug not recommended.

Precautions: To avoid oversedation, use lowest effective dose, particularly in elderly and/or debilitated patients. Consider possibility of suicide attempts; dispense least amount of drug feasible at any one time. To avoid excess accumulation, use caution in patients with compromised liver or kidney function. Meprobamate may precipitate seizures in epileptics.

Adverse Reactions: *Central Nervous System:* Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impairment of visual accommodation, euphoria, overstimulation, paradoxical excitement, fast EEG activity. *Gastrointestinal:* Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations, tachycardia, various forms of arrhythmia, transient ECG changes, syncope; also, hypotensive crises (including one fatal case). *Allergic or Idiosyncratic:* Usually after 1-4 doses. Milder reactions: itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). Others: leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy, fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe, rare hypersensitivity: hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome; bullous dermatitis (one fatal case after meprobamate plus prednisolone). Stop drug, treat symptomatically (e.g., possible use of epinephrine, antihistamines, and in severe cases corticosteroids). *Hematologic:* Agranulocytosis and aplastic anemia (rarely fatal), but no causal relationship established. Rarely, thrombocytopenic purpura. *Other:* Exacerbation of porphyric symptoms.

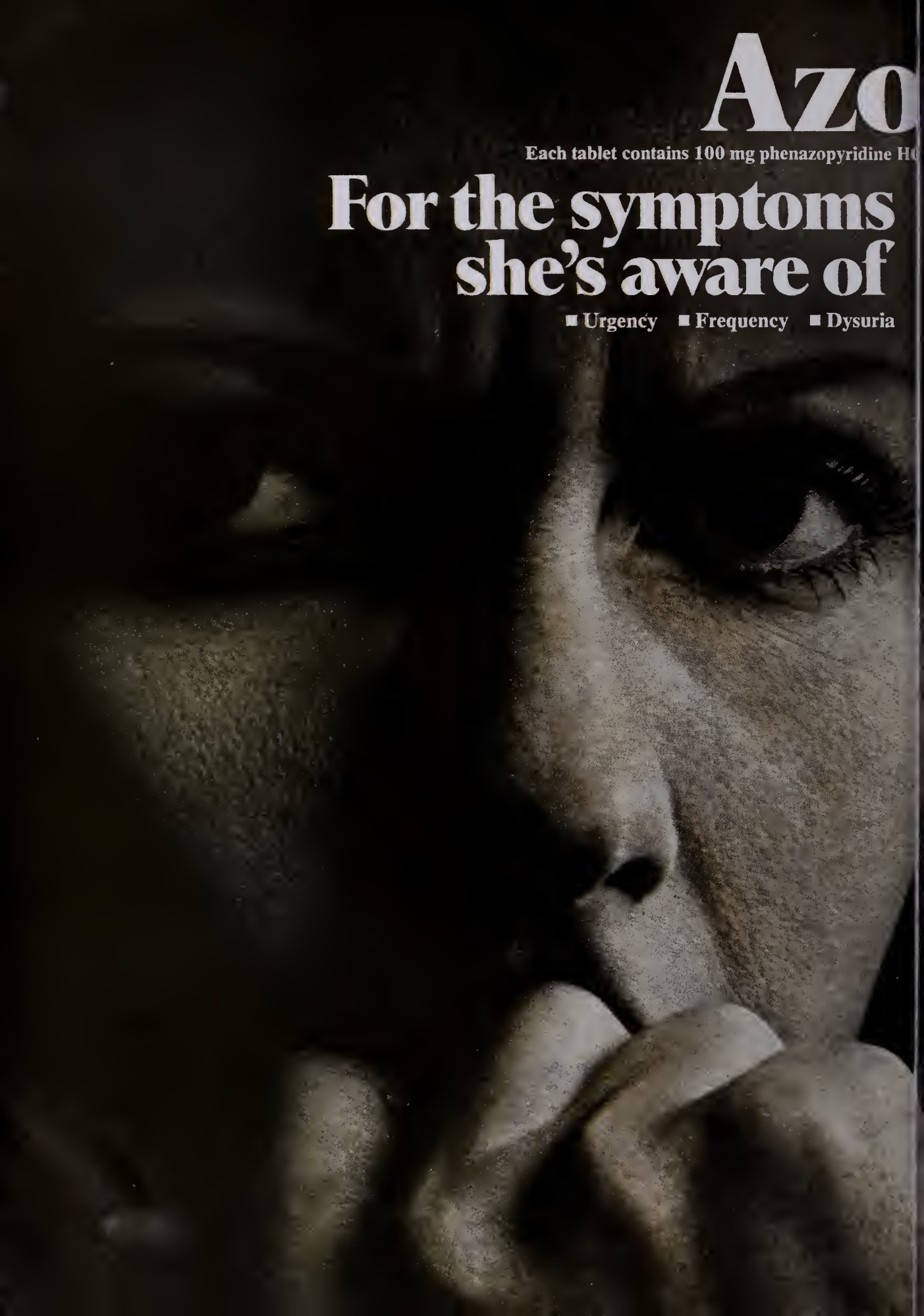
Usual Adult Dosage: 1200 to 1600 mg daily, in three or four divided doses; doses above 2400 mg daily not recommended.

Overdosage: Suicidal attempts with meprobamate, alone or with alcohol or other CNS depressants or psychotropic drugs, have produced drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse, and death. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Meprobamate is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

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Before prescribing, consult package circular or latest PDR information.

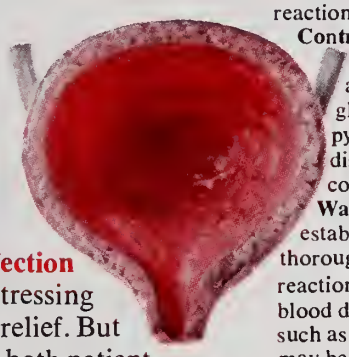
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Azo
Each tablet contains 100 mg phenazopyridine H
For the symptoms she's aware of
■ Urgency ■ Frequency ■ Dysuria

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0.5 Gm sulfamethoxazole.

For the infection you're aware of



isive dual action relieves symptoms, controls infection

Urgency, frequency, dysuria—these are the distressing ptoms of cystitis for which she wants immediate relief. But d control of the infection is equally important to both patient physician. This is the situation that demands dual-action Azo tanol: the analgesic action of Azo (phenazopyridine HCl) for d relief of pain, the antibacterial action of Gantanol® amethoxazole) to control the bladder infection.

id antibacterial action/around-the-clock coverage

In from 2 to 3 hours after the initial 2-Gm adult dose of Gantanol, therapeutic blood and urine levels begin to control eptible *E. coli* as well as susceptible gram-negative and n-positive pathogens. Subsequent b.i.d. doses maintain anti- erial levels throughout a 24-hour period—especially important elp control bacterial build-up in urine retained during sleeping rs. The usual precautions in sulfonamide therapy, including ntenance of adequate fluid intake, should be observed. The t common side effects are nausea, vomiting and diarrhea.

'll feel better while she gets better

As the antibacterial action of Gantanol begins to control the ction, the analgesic action of the Azo component starts relieving symptoms associated with her infected, inflamed and irritated dder. In acute, nonobstructed cystitis—when rapid relief of ptoms and early control of infection are essential—prescribe Gantanol, the basic therapy that helps your patient feel ter while she gets better.

acute painful nonobstructed cystitis

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: In adults, urinary tract infections complicated by pain (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. *Important Note:* Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media for patients already taking sulfonamides. Increasing frequency of resistant organisms currently is a limitation of the usefulness of antibacterial agents. Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 12 to 15 mg/100 ml is considered optimal for serious infections; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established, and teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis, a frequently dose-related reaction, may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *allergic reactions:* erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *gastrointestinal reactions:* nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; and *miscellaneous reactions:* drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infection is 4 tablets initially, then 2 tablets morning and evening. If pain persists beyond seven days, causes other than infection should be sought. After relief has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfamethoxazole and 100 mg phenazopyridine HCl, bottles of 100 and 500.

Application

FOR SPACE IN THE SCIENTIFIC EXHIBIT SECTION

1972 Annual Meeting — Kentucky Medical Association

Convention Center — **Louisville, Kentucky** — **September 19, 20, 21**

Fill Out and Mail to:

ARNOLD C. WILLIAMS, M.D., Chairman

Committee on Scientific Exhibits

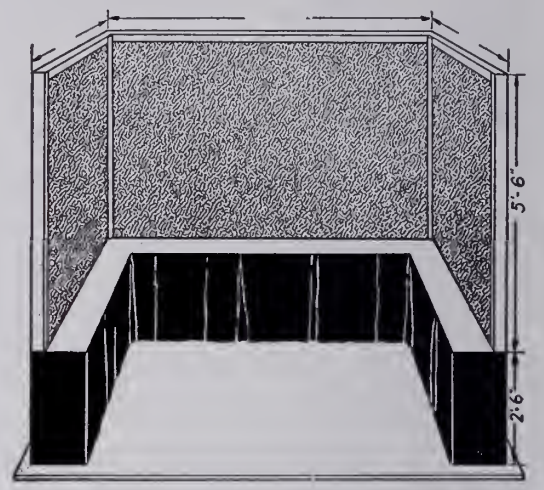
Kentucky Medical Association

3532 Ephraim McDowell Drive

Louisville, Kentucky 40205

Applications for space should be received before July 1, 1972.

The Kentucky Medical Association welcomes and supports scientific exhibits as a facet of continuing postgraduate education.



1. Title of exhibit .....
2. Name(s) of exhibitor(s) .....

   Address .....

   Professional title .....
3. Institution if other than exhibitor .....
4. Amount of linear footage required .....
   (all side walls are four feet)

   SHELF DESIRED? _____Yes _____No
5. Do you wish lighting other than the bracket lights provided? _____Yes _____No.
   (SPOTLIGHTS ARE NOT FURNISHED)

   .....
6. Will summary printed matter be available or obtainable for the interested physician? .....
7. Indicate sources of assistance provided to you in connection with the exhibit .....

   .....
8. Has this exhibit been displayed before? If so, when & where? .....

   .....
9. Please attach a brief outline which includes a general idea of your exhibit.

Date ....

Signature of Applicant

KMA provides, without cost to the exhibitor, simple shelves, bracket lights and a title sign, provided all items are approved in advance by the Scientific Exhibits Committee.
Transportation and erection costs are the responsibility of the exhibitor.
View Boxes, furniture, decorations, etc., may be rented, if desired, by applying directly to the Joseph T. Griffin Company, 704 West Main Street, Louisville, Kentucky 40202.

Wellcome
Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Empirin Compound with Codeine relieves aches, pains, fever and general malaise of colds and of **FLU**

A gratifying announcement about Empirin® Compound with Codeine

CIII

You may now specify up to five refills within six months when you prescribe Empirin Compound with Codeine (unless restricted by state law).

It is significant in this era of increased regulation, that Empirin Compound with Codeine has been placed in a less restrictive category. You may now wish to consider Empirin with Codeine even more frequently for its predictable analgesia in acute or protracted pain of moderate to severe intensity.

Empirin Compound with Codeine No. 3 contains codeine phosphate* (32.4 mg.) gr. ½. No. 4 contains codeine phosphate* (64.8 mg.) gr. 1. *(Warning—may be habit-forming.) Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.



When you select this familiar antibiotic for IV infusion you have available a broad dosage rang that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections. In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomyc hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water But when 4 grams or more per day is given, Lincocin should be diluted in n less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

fections caused by susceptible strains pneumococci, streptococci, and aphylococci, including penicillin-sistant strains. Staphylococcal strains sistant to Lincocin (lincomycin ydrochloride, Upjohn) have been covered. Before initiating therapy, ulture and susceptibility studies should e performed. Lincocin has proved luable in treating patients hyper-nsitive to penicillin or cephalosporins, nce Lincocin does not share ntigenicity with these compounds. owever, hypersensitivity reactions ave been reported, some of these in atients known to be sensitive to enicillin.

Well tolerated at infusion site: Lincocin ntravenous infusions have not roduced local irritation or phlebitis, hen given as recommended. Lincocin usually well tolerated in patients who re hypersensitive to other drugs. evertheless, Lincocin should be used autiously in patients with asthma or gnificant allergies.

n patients with impaired renal function, ne recommended dose of Lincocin ould be reduced to 25—30% of ne dose for patients with normal idney function. Its safety in regnant patients and in infants ss than one month of age has ot been established.

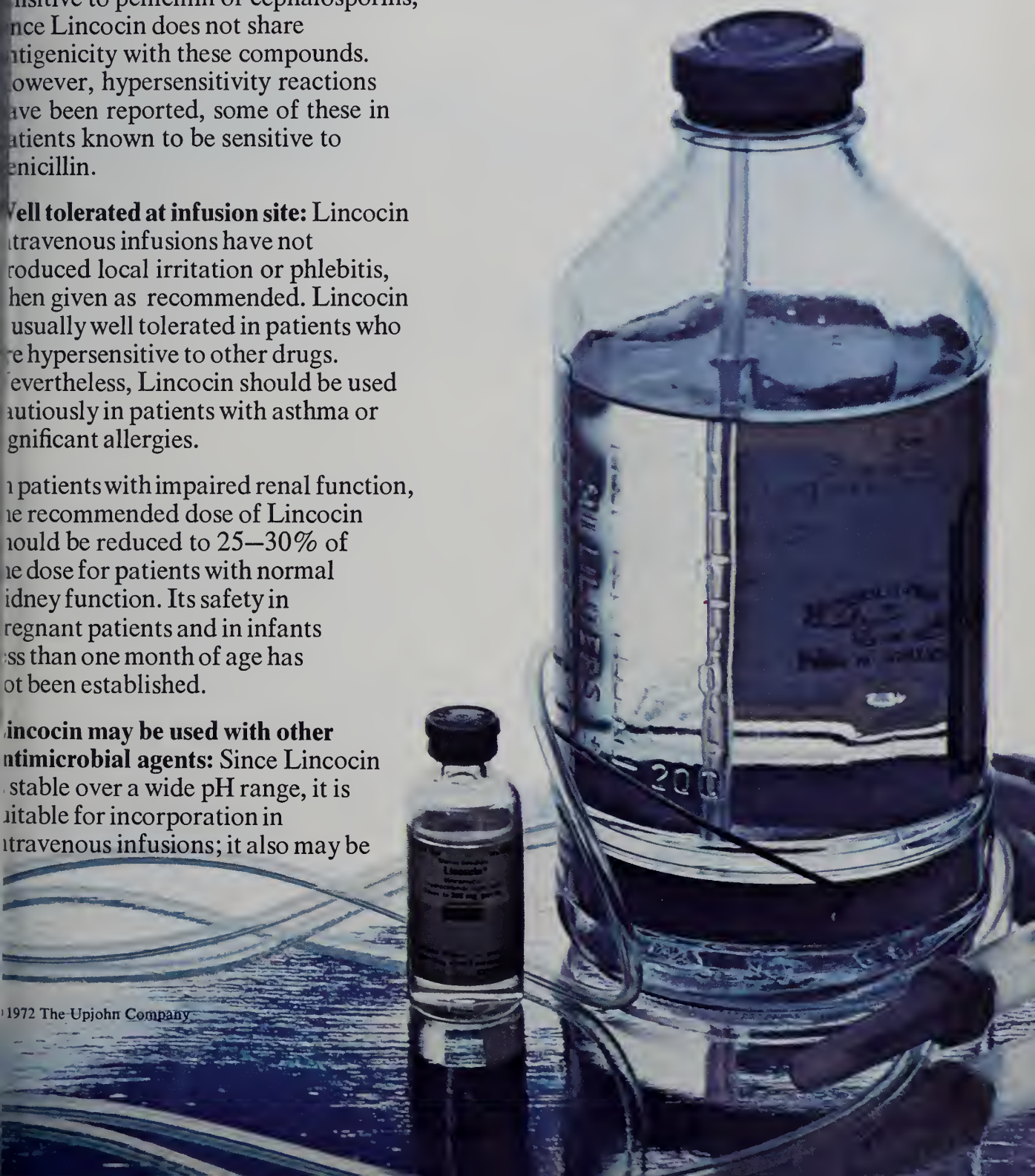
incocin may be used with other ntimicrobial agents: Since Lincocin stable over a wide pH range, it is uitable for incorporation in ntravenous infusions; it also may be administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



1972 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatn *Skin and mucous membranes*—Skin ra urticaria, vaginitis, and rare instances o foliative and vesiculobullous dermatitis been reported. *Liver*—Although no direc lationship to liver dysfunction is establis jaundice and abnormal liver function (particularly serum transaminase) have observed in a few instances. *Cardiovasc* —Instances of hypotension following pa teral administration have been repor particularly after too rapid IV admini tion. Rare instances of cardiopulmonar rest have been reported after too rapi administration. If 4.0 grams or more ad istered IV, dilute in 500 ml of fluid administer no faster than 100 ml per h *Special senses*—Tinnitus and vertigo been reported occasionally. *Local reac* —Excellent local tolerance demonstrate intramuscularly administered Linc (lincomycin hydrochloride). Reports of following injection have been infreq Intravenous administration of Lincoci 250 to 500 ml of 5% glucose in dist water or normal saline has produce local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *500* Capsules—bottles of 24 and 100. *St Solution, 300 mg per ml*—2 and 10 ml and 2 ml syringe. *Syrup, 250 mg per* —60 ml and pint bottles.

For additional product information, co the package insert or see your Upj representative.

MED B-6-S (KZL-7) JA71-1

The Upjohn Company
Kalamazoo, Michigan 49001

Upjo

IN ASTHMA
IN EMPHYSEMA



optional therapy

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

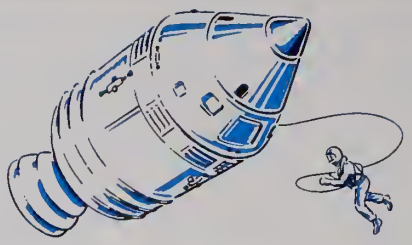
MUDRANE GG-2
A counterpart for Mudrane-2

MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



Man in space, naw fait accampli, re-emphasizes the impartance af Ura-Phasphate therapy. Research inta the effect af space travel an the astranaut reveals that weightlessness causes lass af bane calcium. As the banes are required to bear less and less of the weight af the body they lase calcium, increasing the calcium cantent of the urine. When physical activity is reduced, the acidity af the urine shauld be adjusted ta keep increased calcium in solutian . . . . a praphylaxis ta prevent kidney ar bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, *300 mg.;* SODIUM ACID PHOSPHATE, *500 mg.*

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

Far protectian af the inactive patient 1 ar 2 tablets every 4 ta 6 haurs is usually sufficient ta keep the urine clear, acid and sterile.

2 tablets an retiring will keep residual urine acid and sterile, cantributing ta camfart and rest.

A clinical supply will be sent to physicians and haspitals an request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

The girth control pill



Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Controindicotions: Concurrently with MAO inhibitors, in potients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse

Worning: Although generally safer thon the amphetamines, use with greot coution in potients with severe hypertension or severe cardiovascular diseose. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reoctions: Rarely severe enough to require discontinuotion of therapy, unpleosont symptoms with diethylpropion hydrochloride hove been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it moy occosionolly couse CNS effects such os insomnio, nervousness, dizziness, onxiety, ond jitteriness. In controst, CNS depression hos been reported. In o few epileptics on increose in convulsive episodes hos been reported. Sympothomimetic cordiovoscular effects reported include ones such os tochycordio, precordiol poin, orrhythmio, polpitotion, ond increosed blood pressure. One published report described T-wove chonges in the ECG of o heolthy young mole ofter ingestion of diethylpropion hydrochloride; this wos on isolated experience, which hos not been reported by others. Allergic phenomeno reported include such conditions os rosh, urticorio, ecchymosis, ond erythemo. Gostrointestinol effects such os diorrheo, constipotion, nouseo, vomiting, ond obdominol discomfort hove been reported. Specific reports on the hemotopoietic system include two eoch of bone morrow depression, ogronulocytosis, ond leukopenio. A voriety of miscellooneous odverse reoctions hove been reported by physicions. These include complaints such os dry mouth, heodoche, dyspneo, menstruol upset, hoir loss, muscle poin, decreosed libido, dysurio, ond polyurio.

Convenience of two dosage forms: TEPANIL Ten-tab tablets· One 75 mg. tablet doily, swollowed whole, in midmorning (10 o.m.); TEPANIL· One 25 mg. tablet three times doily, one hour before meols. If desired, on odditionol tablet moy be given in midevening to overcome night hunger. Use in children under 12 years of oge is not recommended.

1-3325 (2876)

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215

Painful night leg cramps...



unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

- Prevents painful night leg cramps
- Permits restful sleep
- Provides simple convenient dosage — usually just one tablet at bedtime

Prescribing Information — Composition: Each white, beveled, compressed tablet contains: Quinine sulfate, 260 mg., Aminophylline, 195 mg. **Indications:** For the prevention and treatment of nacturnal and recumbency leg muscle cramps, including those assaciated with arthritis, diabetes, varicase veins, thrambophlebitis, arteriosclerasis and static faat deformities. **Contraindications:** Quinamm is contraindicated in pregnancy because of its quinine cantent. **Precautions/Adverse Reactions:** Aminophylline may produce intestinal cramps in some instances, and quinine may praduce symptoms of cinchonism, such as tinnitus, dizziness, and gastraintestinal disturbance. Discantinue use if ringing in the ears, deafness, skin rash, or visual disturbances accur. **Dosage:** One tablet upan retiring. Where necessary, dasage may be increased ta ane tablet fallowing the evening meal and one tablet upon retiring. **Supplied:** Battles of 100 and 500 tablets.

Merrell

MERRELL-NATIONAL LABORATORIES I-3508(3050)
Division of Richardsan-Merrell Inc.
Cincinnati, Ohio 45215

Trademark: Quinamm

Quinamm

(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps.

On the next two pages:
An important announcement
for you and your patients.

New from Colgate:

Superior Gram negativ



Effective against Gram positive bacteri and Gram negative bacteria.

As mild as any other toilet soap. With unsurpassed substantivity for long-lasting antibacterial action.

Active ingredients: 3, 4′, 5-tribromosalicylanilide and 4, 2′,4′-trichloro-2-hydroxy diphenyl ether. Together these agents produce a synergistic effect that provides broad spectrum protection against skin bacteria. (P-300 does not contain hexachlorophene.)



The new all-purpose soap for homes, offices, hospitals, schools, restaurants, food processing plants, laboratories, etc.

P-300: Superior protectio

bacteriostasis in a bar soap.

P-300–superior to other antibacterial bar soaps. Proven effective against 25 of 31 cultures representing bacteria of major concern in nosocomial infections and cross-infections.*

BACTERIA	A.T.C.C. No.	P-300	Soap "D"	Soap "S"
Gram Positive				
Staphylococcus aureus	8094	●●●	●	●
Staphylococcus aureus	11371	●●●	●	●
Staphylococcus aureus	8096	●●●	●	●
Staphylococcus aureus	10390	●●●	●	●
Staphylococcus aureus	6342	●●●	●	●
Staphylococcus epidermidis	17917	●●●	●	●
Staphylococcus sp.	13565	●●●	●	●●
Mycobacterium smegmatis	19420	●●●	●●	●●
Listeria monocytogenes	13932	●●●	●●	●●●
Streptococcus pyogenes	7958	●	●	●
Streptococcus mitis	903	●	●	●
Streptococcus sp.	12403	●	●	●
Bacillus anthracis	14578	●	●●	●●
Gram Negative				
Alcaligenes tolerans	19359	●●●	●●	●●●
Neisseria gonorrhoeae	19424	●●	●	●
Neisseria menigitidis	13077	●●●	●	●
Proteus vulgaris	8427	●●●	●	○
Escherichia coli	10536	●	○	○
Escherichia coli	11229	●	○	○
Escherichia coli	11698	●	○	○
Klebsiella pneumoniae	12833	●	○	○
Salmonella typhi	9993	●	○	○
Salmonella typhi	6539	●	○	○
Salmonella typhimurium	13311	●	○	○
Herellea sp.	11959	●	○	○
Pseudomonas aeruginosa	10145	○	○	○
Pseudomonas aeruginosa	7700	○	○	○
Pseudomonas aeruginosa	9027	○	○	○
Pseudomonas aeruginosa	14210	○	○	○
Proteus rettgeri	9250	○	○	○
Proteus morganii	9237	○	○	○

KEY: ZONE OF INHIBITION
●●● = 18.0 mm or larger
●● = 12.0 mm to 17.9 mm
● = Less than 11.9 mm
○ = No Inhibition

Test Method: The three antibacterial soaps were evaluated by means of the standard Protein Adsorption Test, conducted by a recognized independent laboratory, using A.T.C.C. organisms.

*The bacteria were those most frequently named in a nationwide survey of 334 hospitals.



or you and your patients.

For samples of P-300 and product literature, please write:

Professional Services Department
COLGATE-PALMOLIVE COMPANY
740 North Rush Street
Chicago, Illinois 60611

Old winner, new bottle.



DBI® phenformin HCl
tablets of 25 mg.
DBI-TD® phenformin HCl
capsules of 50 and 100 mg.

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.

Contraindications: Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); during or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); after disease states associated with hypoglycemia.

Warnings: Use during pregnancy is to be avoided.

Precautions: 1. *Starvation Ketosis:* This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**

2. *Lactic Acidosis:* This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. *Hypoglycemia:* Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

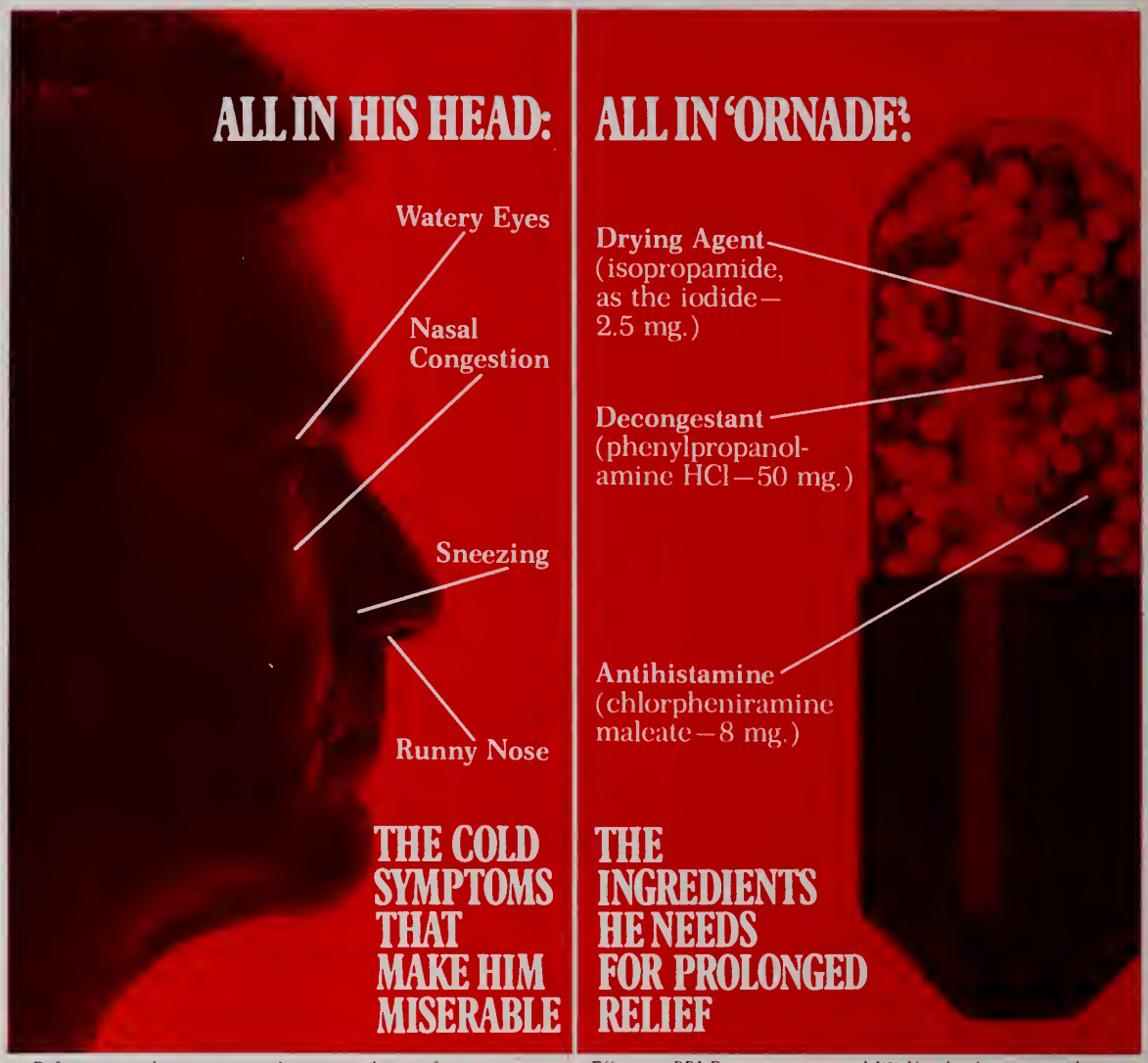
Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake.

(B)98-146-103-C

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502
Distributors

DBI- 8345-9



Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Indications: Upper respiratory congestion and hypersecretion associated with the common cold; acute and chronic sinusitis; vasomotor rhinitis; allergic rhinitis (hay fever, "rose fever," etc.).

Contraindications: Hypersensitivity to any component; concurrent MAO inhibitor therapy; severe hypertension; bronchial asthma; coronary artery disease; stenosing peptic ulcer; pyloroduodenal or bladder neck obstruction. Children under 6.

Warnings: Advise vehicle or machine operators of possible drowsiness. Warn patients of possible additive effects with alcohol and other CNS depressants.

Usage in Pregnancy: In pregnancy, nursing mothers and women who might bear children, weigh potential benefits against hazards. Inhibition of lactation may occur.

Effect on PBI Determination and I^{131} Uptake: Isopropamide iodide may alter PBI test results and will suppress I^{131} uptake. Substitute thyroid tests unaffected by exogenous iodides.

Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

Supplied: Bottles of 50 capsules.

SK&F *Smith Kline & French Laboratories*

Trademark

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brand of sustained release capsules

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Call it what you will, it may be premalignant.

Before

3/29/67 Before therapy with 5%-FU cream. Patient P. T. shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

After

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.



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Topical fluorouracil, considered by some dermatologists to be a major advance in the treatment of multiple solar keratoses,[3,4] offers the physician a relatively inexpensive alternative to cryosurgery, electrodesiccation and cold knife surgery. Of the topical fluorouracils available, only Efudex offers 2% and 5% solution and 5% cream formulations—formulations that have proved effective in the treatment of these mutliple lesions.

Usual duration of therapy, 2 to 4 weeks.

Studies showed that with the 2% and 5% Efudex preparations, the usual duration of therapy was only 2 to 4 weeks.[5] Other studies with topical fluorouracil revealed that when concentrations of less than 2% were used, significant numbers of lesions recurred.[6]

Treats the lesions you can't see, too.

Numerous lesions, not apparent prior to 2% and 5% Efudex therapy, manifested themselves by definite reactions, while intervening skin remained relatively unaffected.[5] The early eradication of these subclinical lesions (which may otherwise have undergone further progression) probably accounts for the reduced incidence of future solar keratoses in patients treated with topical fluorouracil—especially with 5% concentrations.[6]

How to identify solar keratoses.

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Predictable therapeutic response.

The response to a typical course of Efudex therapy is usually characteristic and predictable. After 3 or 4 days of treatment, erythema begins to appear in the area of keratoses. This is followed by a moderate to intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of this response generally occurs two weeks after the start of therapy and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. Lesions that do not respond should be biopsied.

References: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Urne & Stratton, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T, and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. 3. Belisario, J. C.: *Cutis, 6*:293, 1970. 4. Sams, W. M.: *Arch. Derm., 97*:14, 1968. 5. Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and Klein, E.: *Cancer, 25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

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Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

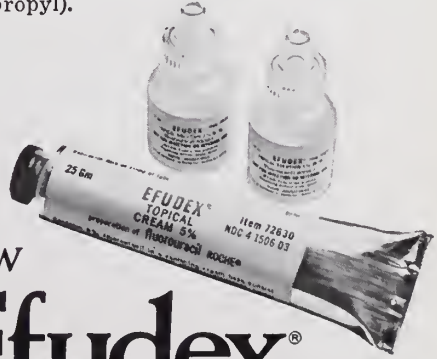
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

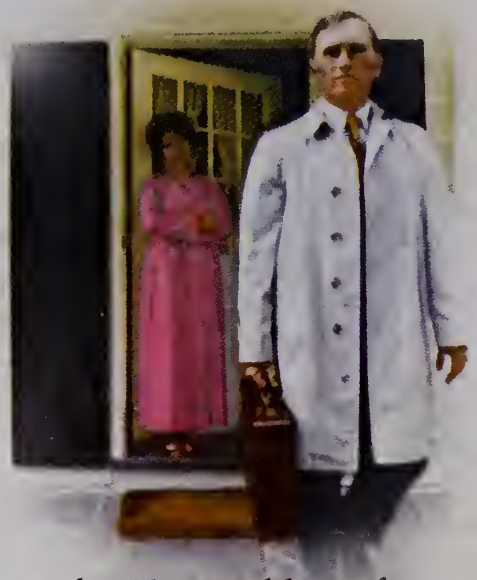
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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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The Journal of The KENTUCKY Medical Association



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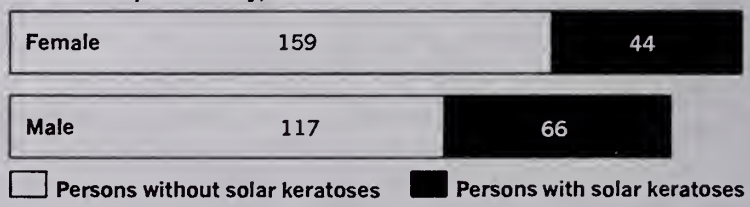
What it means to live and work in Tipton County, Tennessee

Persons who are white and over 40 have one chance in four of having solar keratoses... which may be premalignant

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

Prevalence of solar keratoses in white persons over 40 in Tipton County, Tennessee



*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



olar, actinic, senile keratoses

alled by many names, the typical lesion is flat r slightly elevated, brownish or reddish in olor, papular, dry, adherent, rough, sharply efined; usually multiple lesions, chiefly on xposed portions of the skin.

equence/selectivity of response

rythema in areas of lesions may begin after everal days of therapy; height of reaction nly in affected areas)* usually occurs within wo weeks, declining after discontinuation of herapy. Since this response is so predictable, sions that do not respond should be biopsied o rule out the presence of a frank neoplasm.

osmetic results

osmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

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Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

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TOPIC: CURRENT DEVELOPMENTS IN RHEUMATOLOGY

This symposium will present current developments in rheumatology with emphasis on pathogenesis and laboratory procedures relevant to diagnosis and management of commonly encountered rheumatic diseases. Topics will include rheumatoid and osteoarthritis, systemic lupus erythematosus, new knowledge on infectious agents and connective tissue diseases, and an approach to diagnosis and treatment of painful disorders of the foot. Panel discussions with audience participation will conclude morning and afternoon sessions.

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NICHOLAS J. GIANNESTRAS, M.D. Cincinnati, Ohio	*Painful Disorders of the Foot: Diagnosis and Management*
DAVID S. HOWELL, M.D. Miami, Florida	*Osteoporosis: Pathogenesis and Management*
ROLAND W. MOSKOWITZ, M.D. Cleveland, Ohio	*Osteoarthritis: Pathogenesis and Current Experimental Models*
GORDON C. SHARP, M.D. Columbia, Missouri	*Systemic Lupus Erythematosus: Pathogenesis and Laboratory Features*
JOHN R. WARD, M.D. Salt Lake City, Utah	*Rheumatoid Arthritis and Infectious Agents: Facts and Concepts*

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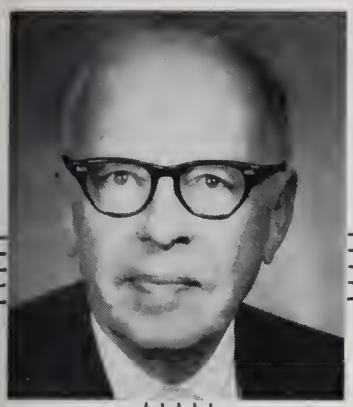
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MESSAGE FROM THE PRESIDENT

THE KENTUCKY General Assembly completed its 1972 regular session on Friday evening, March 17. For the most part, our patients fared well from the actions taken on matters with medical implication. I certainly want to express my gratitude to the long hours and extra effort expended by our State Legislative Chairman, Doctor William Hall of Owensboro, and to our staff legislative representatives, Gil Armstrong (Senate) and Jerry Mahoney (House of Representatives). This extra time and endeavor is appreciated—but, I might also point out, is essential for success.

Some of our major medical legislation approved included: (1) separating Medical Licensure from the Board of Health with plans to move the Licensure Board to the KMA Headquarters, (2) exempting physicians from response in damages for action taken as members of peer review committees, (3) strengthening physician participation on city and county Boards of Health, (4) a Certificate of Need which would eliminate unnecessary construction of medical facilities, and (5) a Statute of Limitations bill favorable to the profession. All of these were a part of our legislative program for this year.

A Generic Drug bill passed with adequate safeguards for our patients added to the bill. Generic equivalents, as approved by the Formulary Commission authorized by the Legislature, should assure our patients of quality drugs. It has strict controls, and we are hopeful that any drug you might authorize be substituted have its savings, if any, passed on to the patient. (This was the purpose of the bill, we felt, but its sponsors would not leave such a statement in it.)

We observed nothing happening in the field of cultism or quackery. The chiropractors were contained from legislatively increasing their scope of practice, and our proposal requiring all practitioners of the healing arts to be graduated from an accredited school did not get any significant action.

All in all, it was a very acceptable year for medicine in the Kentucky General Assembly. We extend our vote of confidence to Kentucky's lawmakers who we acknowledge do not have an easy task, and we also again express appreciation to every physician, Auxiliary member, and all others who participated and assisted in bringing about this successful legislative year.

My charge to you now is to keep up the same good work as we attempt to make our views known to our national legislators in the United States Congress on matters affecting medicine and our fellow citizens.

John S Harter



THE INSURANCE PAGE



Should the Doctor Pay for "Unnecessary" Hospital Admissions?

IN the April, 1971, issue of the *JKMA,* an editorial on "Diagnostic Hospital Admissions" appeared on the Insurance Page. The following statement appeared in this editorial. "The doctor should not be concerned with trying to interpret the patient's insurance policy and should not be concerned if the patient, or a third party, pays the hospital bill." The writer still believes in this principle. However, legislation and legal opinions sometimes force a doctor to act contrary to his opinion. It is such a legal opinion that is the subject of today's comment.

In a recent legal precedent, a Philadelphia Municipal Court judge held a physician responsible for hospital cost incurred by a patient that Blue Cross refused to pay.

Blue Cross of Greater Philadelphia held that the patient was admitted as a diagnostic case and refused to reimburse the hospital for the bill. When the patient refused to pay, the hospital instituted proceedings against the patient, and Judge Glancey made the physician a co-defendant in the case. Pennsylvania Insurance Commissioner Herbert S. Denenberg told the *American Medical News* that he feels the court decision was sound and fair, and does justice between the patient and the appropriate parties. Denenberg further stated that this will make physicians think twice before putting a patient into a hospital.

The writer is inclined to disagree with the first part of this statement, but agrees with the second part. If I am to be responsible for the patient's bill, this certainly would affect my judgement about whether or not a patient should be admitted to the hospital; and many people may not be admitted who need medical service.

The writer is not familiar with insurance contracts in other states. In Kentucky, the physicians agreement with Blue Shield makes no mention of diagnostic admissions, "unnecessary admissions," or any kind of responsibility on the part of the physician about admitting a patient to the hospital. The agreement only refers to fees and peer review of claims in order to determine the reasonableness of the fee. Kentucky physicians have no agreement whatsoever with Blue Cross or any other hospitalization insurance company.

In the future, a physician should be very cautious about signing agreements which may make him liable for hospital costs.

A doctor's responsibility is to his patient and to the hospital by virtue of being on the hospital medical staff. If the doctor causes unnecessary hospital admissions, it would be proper for the hospital medical staff to discipline him. Under the present set up, it is difficult to see that a doctor has any responsibility to an insurance company, if he has no contract or agreement with the company.

Most physicians have had the experience of patients insisting that the insurance covered hospitalization for diagnostic purposes, and the patient insisted on being admitted to the hospital for diagnostic studies, even when the doctor thought that the policy would not cover the admission. In all incidences of this kind, it should be recorded in the office records or in the emergency room records prior to admission what the patient said and that the doctor does not intend to interpret the insurance policy,

which is a contract between the patient and the insurance company.

If it appears in the record that the patient insisted on hospitalization against the doctor's recommendation, it would be very difficult for a court to find the doctor responsible for hospital costs.

On the other hand, if it could be shown that the doctor insisted on admitting the patient to the hospital, where there was no clear-cut indication and the patient was not demanding hospital admission, then it might seem logical that the doctor would be liable if the patient sued the doctor, but it would not seem logical that the insurance company would have a claim against the doctor, since the insurance company and doctor have no contract.

It may be possible that an occasional doctor admits the patient to the hospital for no other reason than to boost his personal income, but the great majority of over-utilization of hospitals is due to the patient's insistence on admission and due to the fact that it is nearly impossible to get some patients to leave the hospital.

It is important that the doctor feel a great responsibility in seeing that hospital beds are properly utilized, but penalizing the doctor is not the way to achieve this goal.

LEWIS DICKINSON, M.D.

Editors Note: Also see Letter-to-the-Editor from Mr. J. Ed McConnell, President, Kentucky Physicians Mutual, Inc. and Blue Cross Hospital Plan, Inc. (page 318).

Continuing Educational Opportunities

From The

KMA Postgraduate Medical Education Office

IN KENTUCKY

APRIL

12 PANMED television series, "Differential Diagnosis and Provisional Treatment of Myofacial Pain," KET 11:00 pm EST (10:00 CST)

13-14 KMA Interim Meeting, Holiday Inn, Somerset

13 Spring meeting, Kentucky Chapter, American College of Radiology, 6 pm, Ramada Imperial Inn, Lexington

16-22 Postgraduate program, "Annual Family Medicine Review," University of Kentucky. For further information write: Frank R. Lemon, M.D., Associate Dean for Continuing Education, University of Kentucky College of Medicine, Lexington, Kentucky 40506

19 Postgraduate course, "Contraceptive Problems," by Marvin Yussman, M.D., 6:30 pm, Jewish Hospital, Louisville

19 PANMED television series, "Space Analysis of the Dentition and Space Management," KET 11:00 pm EST (10:00 CST)

22 Ninth Symposium on Oral Cancer, Department of Surgery, University of Louisville School of Medicine and the School of Dentistry, Health Sciences Center Auditorium

25 Postgraduate course, "Development of Disabilities in Children," by Bernard Weisskopf, M.D., Associate Professor, Department of Pediatrics, Mental Retardation and the Handicapped Child, Child Evaluation Center, 7:00 to 9:00 pm, Children's Hospital Amphitheater, Louisville

27 Eighth Annual Rheumatic Disease Symposium, University of Louisville School of Medicine and Kentucky Chapter of the Arthritis Foundation, Amphitheater of Health Sciences Center, Louisville

MAY

3-5 Postgraduate program, "Coronary Disease and Other Myocardial Abnormalities," University of Kentucky. For further information write: Frank R. Lemon, M.D., Associate Dean for Continuing Education, University of Kentucky College of Medicine, Lexington 40506

3-4 Spring meeting, Kentucky Chapter, American Academy of Pediatrics, Lake Barkley

10 PANMED television series, "Lung Cancer," KET 11:00 pm EDT (10:00 CDT)

11-14 Annual meeting, Kentucky Academy of Family Practice, Lake Barkley

12-13 Third Biennial Symposium, Kentucky Obstetrical and Gynecological Society, "Cancer in Women," Stouffers Inn, Louisville

17 PANMED television series, "Intensive Care —The Need," KET 11:00 EDT (10:00 CDT)

17 Postgraduate course, "Hiatus Hernia," by Hiram C. Polk, M.D., 6:30 pm, Jewish Hospital, Louisville

24 PANMED television series, "Intensive Care —The Unit," KET 11:00 pm EDT (10:00 CDT)

25 Medical Malpractice Litigation Symposium, Kentucky Bar Association, 9:30 am, Executive Inn, Louisville

26-27 Spring meeting, Kentucky Surgical Society, Lake Barkley

31 PANMED television series, "Intensive Care —The Team," KET 11:00 pm EDT (10:00 CDT)

IN SURROUNDING STATES

APRIL

17-21 Fifty-third Annual Session, American College of Physicians, Atlantic City Convention Hall, Atlantic City, New Jersey

22-23 Twenty-fourth Annual Joseph and Samuel Freedman Lectures in Diagnostic Radiology, University of Cincinnati College of Medicine. For further information write: Benjamin Felson, M.D., Department of Radiology, Cincinnati General Hospital, Cincinnati, Ohio 45229

26-27 Postgraduate course, "New Concepts and Practices in Disease of the Colon and Rectum," Cleveland Clinic Educational Foundation, Cleveland, Ohio

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

This 15-year-old single gravida 2, para 0, abortus 1 was admitted to the hospital on 6/30/70. Her last normal menstrual period was 10/8/69, and her EDC was 7/15/70. She stated that her contractions began at about 0200 hours on 6/30/70. The pregnancy was normal by history. There was no history of ruptured membranes prior to onset of labor.

Blood pressure was 132/70, pulse 108. Breasts, lungs, and heart were normal. Examination of abdomen revealed the uterus to be term size. The fetal heart tones were present in the right lower quadrant at 145 per minute. There were no other abdominal masses palpable. The admitting impression was term pregnancy in active labor.

Pelvimetry (x-ray) was made on 6/30/70. This revealed an inlet of 80% and a midplane of 84% calculated normal. At this time, it was decided to give the patient some stimulation with pitocin. Good progress was made and it was thought that she was deliverable per vaginum.

Early on 7/1/70, the patient was taken to the delivery room and given a saddle block. She had a failed forceps. Staff consultation was obtained, and a Cesarean section was elected. Fetal heart tones remained good throughout this time. While on the operating table, the patient sustained a vomiting episode and aspirated some of the vomitus.

Technically, the operation was successful and the infant was delivered in satisfactory condition. In the immediate postoperative period, the patient was given intravenous steroids and was placed on antibiotics. The steroids and antibiotics were continued and the patient made some initial improvement. However, her blood gases seemed to show deterioration, and there was pulmonary edema fluid present; a tracheostomy was elected. The tracheostomy was done by the surgical consultant.

After the tracheostomy, the patient became somewhat more alert. Her condition seemed to be improving somewhat. On 7/2/70 she had a temperature of 99.8°. She still had marked chest congestion. On the afternoon of 7/2/70, the patient had a cardiac arrest. She was resuscitated and her condition remained somewhat grave. However, during the days of 7/3 and 7/4 her medicines were continued, but her condition did not improve at all.

On the 4th day the patient began to have some bleeding from her N G Tube and was thought to have a stress ulcer. At 1935 hour, the patient was thought to be bleeding out of her nose. This was pulmonary edema fluid, and the right lung field was completely filled with fluid to auscultation. Her blood pressure was 70 systolic. Her pulse was 140. She was thought to be in pulmonary edema. Ethacrynic acid was given intravenously and digoxin was also given intravenously. The patient's condition deteriorated and after prolonged and sustained attempts, at 2000 hour on 7/4/70 the patient was pronounced dead.

Autopsy was refused.

The final diagnosis is term intrauterine pregnancy delivered by Cesarean section.

Complications—cephalo pelvic disproportion and aspiration pneumonia with pulmonary death.

The Committee classified this death as direct obstetrical with preventable factors. It was felt that the etiology of her vomiting was most likely supine hypotensive syndrome combined with spinal anesthesia. Both cause pooling of blood in the lower extremities and may lower systemic pressure sufficiently that vomiting will occur. This can be prevented by pushing the uterus toward the left, off of the vena cava, and by pre-loading the patient prior to delivery with 500-1000 ml. of a balanced salt solution such as lactated Ringer's solution. The level of the spinal was not stated. One must remember that patients with spinal anesthesia high enough to allow Cesarean section have difficulty coughing and clearing their airway; and therefore,

these patients must be monitored very carefully.

The major problems with aspiration of vomitus are two. 1) The airway must be cleared of obstructing particles and liquids so that the patient can breathe. This is best done by prompt suction and, if necessary, lavage of the trachea and bronchi with normal saline solution. 2) The second problem is that of pH of the aspirated material. If this is true gastric contents that are aspirated and the pH is extremely low, a chemical burn will result. If the pH is below 2.5 and any significant amount of lung area is burned, survival is very unlikely. The patient simply has no lung left with which to breathe. If the pH is above 2.5 and the burn is limited, survival can be expected with prompt therapy. Lavage with saline and even sodium bicarbonate will remove the offending material, but cannot get to the burned surfaces quickly enough to prevent the burn in the first place. Removing the offending material will prevent further burning. The patient must be given high doses of steroids intravenously immediately and must be carefully monitored for serum pH, so that effective treatment of systemic acidosis may be instituted as soon as it is diagnosed. However, if a true burn of the lung does occur, survival is unlikely. In this particular case, there is question whether or not the patient bled from her GI tract somewhere in the esophagus or stomach either from the nasogastric tube or from a stress ulcer. This is not documented; and it would seem, from the history, as if this represented pulmonary edema.

In summary, this death was preventable. Pre-loading of these patients with a balanced salt solution prior to administration of spinal anesthesis will usually prevent hypotension; and definitely, careful monitoring for onset of supine hypotensive syndrome can prevent vomiting and aspiration. Treatment of aspiration is immediate suction and lavage, if it is thought that aspirant was carried down into the lung, and institution of massive intravenous steroid therapy. Corrective acid-base balance management must be started; and if the burn is limited, the patient will survive.

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Indications: Acute, recurrent or chronic urinary tract infections (primarily cystitis, pyelitis, pyelonephritis) due to susceptible organisms (usually *E. coli, Klebsiella Aerobacter, Staphylococcus aureus, Proteus mirabilis* and less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

IMPORTANT NOTE: *In vitro* sulfonamide sensitivity tests are not always reliable. The test must be carefully coordinated with bacteriologic and clinical response. When the patient is already taking sulfonamides, follow-up cultures should have aminobenzoic acid added to the culture medium. Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of antibacterial agents including the sulfonamides, especially in the treatment of chronic and recurrent urinary tract infections.

Free sulfonamide blood levels should be measured in patients receiving sulfonamides for serious infections since there may be wide variations with identical doses; 20 mg/100 ml should be maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Hypersensitivity to sulfonamides, infants less than 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis), pregnancy at term, and during the nursing period.

Warnings: Safety of sulfonamides in *pregnancy* has not been established. Sulfonamides will not eradicate group A streptococci. Deaths associated with sulfonamide administration have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalyses with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution when impaired renal or hepatic function, severe allergy or bronchial asthma is present. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis (frequently a dose-related reaction) may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia, methemoglobinemia. *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia, allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis, stomatitis. *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, somnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred with sulfonamide therapy. Sulfonamides bear certain chemical similarity to some goitrogens, diuretics and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents.

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Description: CANDEPTIN (candicidin) Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% Candicidin activity in U.S.P. petrolatum. 3 mg. of Candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candicidin powder equivalent to 3 mg. (0.3%) Candicidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETTES Vaginal Capsules contain 3 mg. of Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.
Action: CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETTES Vaginal Capsules possess anti-monilial activity.
Indications: Vaginitis due to Candida albicans and other Candida species.
Contraindications: Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETTES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.
Caution: During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.
Adverse Reaction: Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETTES Vaginal Capsules have been extremely rare.
Dosage: One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETTES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.
Available Dosage Forms: CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETTES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

References: **1.** Olsen, J.R.: Journal-Lancet *85*:287 (July) 1965. **2.** Giorlando, S.W.: Ob/Gyn Dig. *13*:32 (Sept.) 1971. **3.** Decker, A.: Case Reports on File, Medical Department, Julius Schmid. **4.** Giorlando, S.W., Torres, J.F., and Muscillo, G.: Am. J. Obst. & Gynec. *90*: 370 (Oct. 1) 1964. **5.** Lechevalier, H.: Antibiotics Annual 1959-1960. New York, Antibiotica Inc., 1960. pp. 614-618. **6.** Friedel, H.J.: Maryland M.J., *15*:36 (Feb.) 1966.

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Pinworm therapy is often a family affair





Contraindications: History of hypersensitivity to thiabendazole.
Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.
Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction, patients should be carefully monitored.
Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live Ascaris in the mouth and nose. Hypersensitivity reactions

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Include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.

Supplied: Chewable tablets, containing 500 mg thiabendazole, boxes of 36, strip packaged, individually foil wrapped; suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

addendum

INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infestations, whether encountered singly or in combination. Dosages are weight related; therefore, a weight-dose chart is included in the Direction Circular for your convenience when writing a prescription. MINTEZOL should be given after meals if possible.

INDICATIONS	DOSAGE (1st Day)	ADDITIONAL REGIMEN	COMMENTS
Pinworm disease	Two doses of 1 tablet/50 lb	Repeat 7 days later	This regimen is designed to reduce the risk of reinfection. However, if not practical, repeat the regimen the next day.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses of 1 tablet/50 lb	Repeat the next day	Alternatively, a single dose of 2 tablets/50 lb may be given. However, a higher incidence of side effects should be expected.
Creeping eruption	Two doses of 1 tablet/50 lb	Repeat the next day	If active lesions are still present 2 days after completing this regimen, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses of 1 tablet/50 lb	Repeat for 2 to 4 successive days	The optimal dosage for the treatment of trichinosis has not been established.

The recommended maximal daily dosage is 3 g (6 tablets).

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

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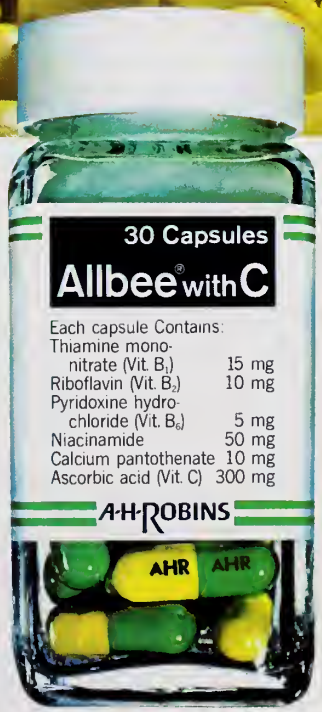


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hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital (warning: may be habit forming)	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.

Brief summary. Side effects: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction as in prostatic hypertrophy. Contraindicated in patients with acute glaucoma, advanced renal or hepatic disease or hypersensitivity to any of the ingredients.

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– George Sarton, from "The History of Medicine Versus the History of Art"

Should nongovernment scientists and physicians play a role in drug regulation?

Opinion

Results of a questionnaire to 7000 physicians:

82.8%
Physicians should play a role

78.3%
Independent scientists should play a role

69.8%
Medical academicians should play a role

Opinion & Dialogue

Dialog

Should nongovernment scientists and physicians play a role in drug regulation?

Doctor of Medicine

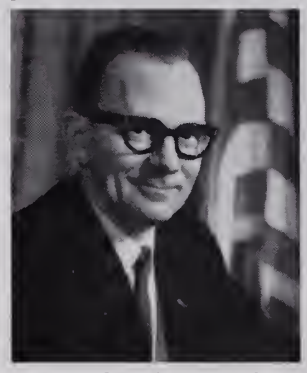
Herbert L. Ley, Jr., M.D., M.P.H., Formerly Commissioner, F.D.A. (1968-1969) Currently Medical Consultant

In order for drug regulation to be effective, participation in the regulatory process from nongovernment physicians and scientists must be encouraged. Without such involvement, there will continue to be a high degree of controversy surrounding any regulations promulgated by the Food and Drug Administration.

There are two areas in which participation and communication by nongovernment physicians and scientists could significantly improve the process of regulation. First, scientists and physicians throughout the country could become involved in consulting relationships with the Food and Drug Administration in important scientific areas while regulatory policies are being evolved. If nongovernment professionals could bring their expertise and experience to bear early in the decision-making process, they would have less reason to criticize the final outcome.

Secondly, practicing physicians, academic physicians, and academic-based scientists could make it their business to comment on proposed regulations appearing in the Federal Register. Ideally, a system could be instituted whereby medical, scientific and technical people could see the Federal Register regularly, and provide the Food and Drug Administration with a body of opinion that has so far gone unheard. The FDA is caught among pressures from industry, Congress, the Presidential Administration and consumers. It should also feel pressures from practicing physicians and scientists.

In order to become more involved in these stages of the drug regulatory process, nongovernment physicians and scientists should begin to exercise their influence through their respective professional organizations,



state and national medical societies, and specialty groups. Logically, a letter from these organizations representing a collective opinion has far greater weight in the regulatory process than individual letters. If the Food and Drug Administration receives opinions from these organizations early, before a regulation gets into the Federal Register, they are in a good position to respond with further study and review. Without such dissenting opinions, there is very little incentive to make changes in proposed regulations.

One instance in which practitioners did influence drug regulatory affairs in this way is the recent controversy that arose over the legitimacy of drug combinations. The strong opinion of practitioners on the value of such medication in clinical practice played a very prominent role in making the Food and Drug Administration modify its rather restrictive policy.

Another way in which practitioners can effectively influence drug regulations is by working with drug manufacturers conducting clinical trials of chemotherapeutic agents. When a drug is rated other than effective it may only mean that there is a lack of controlled clinical evidence as to efficacy. Thus, physicians might offer to conduct clinical studies that could help keep a truly effective drug in the marketplace. The treatment of diseases such as diabetes and angina are areas where the practitioner can aid in clinical studies because patients suffering from these diseases are rarely found in the conventional hospital setting.

By working with ethically and scientifically sound study designs in his everyday practice, the practitioner could begin to play an important part in determining official ratings on drug efficacy.

Nongovernment physicians and scientists and the FDA should also improve their lines of communication to the public. The medical community must develop a voice every bit as loud as that of the consumerists, the press, and others who sometimes criticize without complete information. If not, much of the medical commu*and* federal regulator will often be represent simplistic and somev misleading terms.

One illustration of misuse of the media in regard is the recall of coagulant drugs sev years ago. This FDA a was given publicity by press and television went far beyond its able importance. The r was a very uncomfort situation for the pra tioner who had pati taking these medicat Since the practitioner pharmacist had not informed of the actio the time it was public in most states they deluged with calls f worried patients.

The practitioner ca tempt to solve these p lems of inadequate com nication in several w One would be the crea of a communications in state pharmacy socie When drug regulation is to be announced, th ciety could immedia distribute a message t ery pharmacist in the s The pharmacist, in t could notify the physic in his local communit that he and the physi could he prepared to swer inquiries from tients. Another appro would be to use pro sional publications practitioner receives.

All of this leads bac my opening contentio drug regulation is to b fective, timely, and rel to the realities of cli practice, a better meth communication and f back must be developed tween the nongovernm tal medical and scien communities and the r latory agency.

ie

Maker of Medicine



Henry W. Gadsden,
irman & Chief Executive
fficer, Merck & Co., Inc.

n my opinion, it is the
onsibility of all physi-
s and medical scientists
ake whatever steps they
k are desirable in a law-
regulation-making
ess that can have far-
ching impact on the
ctice of medicine. Yet
y events in the recent
t indicate that this is
happening. For exam-
, it is apparent from
g efficacy studies that
NAS/NRC panels gave
e consideration to the
lence that could have
n provided by practic-
physicians.

There are several current
elopments that should
rease the concern of
cticing physicians about
g regulatory affairs. One
he proliferation of mal-
ctice claims and litiga-
n. Another is the effort
government to establish
relative efficacy of
gs. This implies that if
hysician prescribes a
g other than the "estab-
ed" drug of choice, he
y be accused of practic-
something less than
st-class medicine. It
uld come perilously
e to federal direction of
v medicine should be
cticed.

n order to minimize this
d of arbitrary federal
ion, a way must be
nd to give practitioners
h voice and represen-
tation in government affairs. Government must be caused to recognize the essentiality of seeking their views. One of the difficulties today, however, is that there is no way for concerned practitioners to participate in the early stages of decision-making processes. They usually don't hear about regulations until a proposal appears in the Federal Register, if then. By that time a lot of concrete has been poured, and a lot of boots are in the concrete.

Physicians in private practice, and particularly clinicians, should press for representation on the advisory committees of the Food and Drug Administration, joining with academic and teaching hospital physicians and scientists who are already serving. Though practitioners may not have access to all available information, the value of their clinical experience should be recognized. Clinicians, for example, rightly remind us that difficulty in *proving* precise effects does not necessarily mean a drug is ineffective.

Unless practitioners are more involved in drug regulations, it will be increasingly difficult for the pharmaceutical industry and scientists elsewhere to make optimal progress in drug development. The benefit/risk ratio must be re-emphasized, and as part of this it must be acknowledged that benefit can come from the judgments of medical science as a whole. Even this concept, unfortunately, is not always accepted in drug regulatory processes. For example, if current medical opinion holds that an excess of total lipids and cholesterol in the blood is probably predisposing to atherosclerosis, and if a drug is discovered which reduces total lipids and cholesterol, the drug ought to be accepted *prima facie* as a contribution to medical science . . . until someone disproves the theory. The sponsor should not have to prove the theory as well as to develop and test the drug.

I feel a major new effort must also be made to erase the feeling of mistrust of medicine and of medicines that seems to be growing in the public consciousness. Triggered primarily by strident announcements in Washington, people are reading and hearing confidence-shaking things almost continuously. Although challenge and awareness are essential to medical advancement, our long-term goal is constructively to build, not destroy. This means strengthening patient-physician relationships based on mutual confidence and trust. And in matters of health policy, it means working toward participatory rather than adversary proceedings—where everyone with an interest and a capacity to contribute has an opportunity to be heard . . . and, if that opportunity is not spontaneously afforded him, he may seek it.

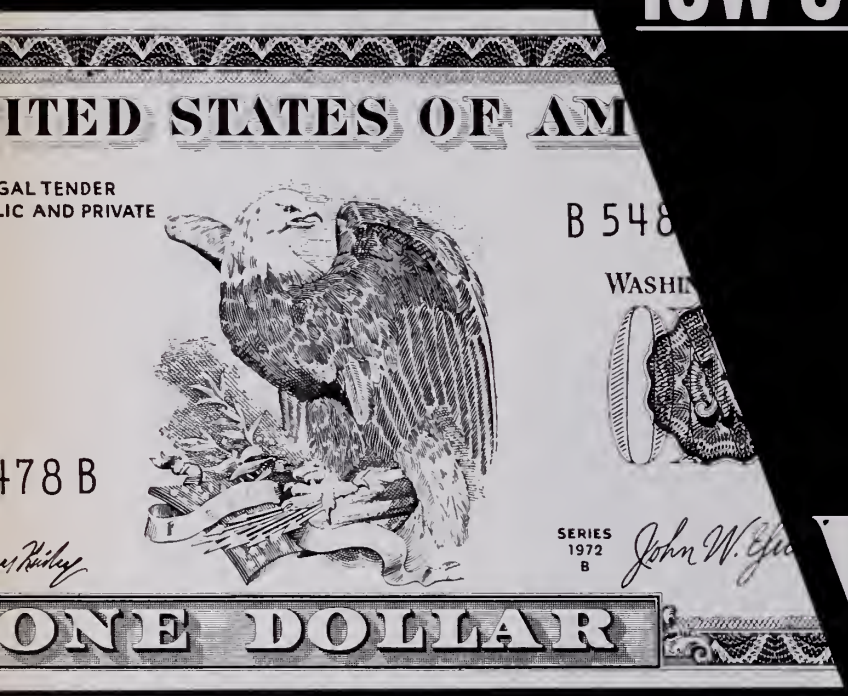
Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.

P·M·A

The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Something new in ampicillin therapy: **low cost**



Versapen®-K

POTASSIUM HETACILLIN

the ampicillin derivative

Each capsule contains potassium hetacillin equivalent to 225 mg. or 450 mg. ampicillin.

BRISTOL

BRISTOL LABORATORIES
Division of Bristol-Myers Company
Syracuse, New York 13201



rheumatoid arthritic blowup...

Tandearil® Geigy

oxyphenbutazone NF

tablets of 100 mg.

tant Note: This drug is not a simple analgesic. t administer casually. Carefully evaluate patients starting treatment and keep them under close vision. Obtain a detailed history, and complete al and laboratory examination (complete ram, urinalysis, etc.) before prescribing and at nt intervals thereafter. Carefully select patients, ng those responsive to routine measures, con- icated patients or those who cannot be observed ntly. Warn patients not to exceed recommended e. Short-term relief of severe symptoms with allest possible dosage is the goal of therapy. e should be taken with meals or a full glass of Patients should discontinue the drug and report diately any sign of: fever, sore throat, oral s (symptoms of blood dyscrasia); dyspepsia, tric pain, symptoms of anemia, black or tarry or other evidence of intestinal ulceration or rrhage, skin reactions, significant weight gain or a. A one-week trial period is adequate. Discon- in the absence of a favorable response. Restrict ent periods to one week in patients over sixty. *ations:* Acute gouty arthritis, rheumatoid arthritis, matoid spondylitis.

indications: Children 14 years or less; senile nts; history or symptoms of G.I. inflammation or tion including severe, recurrent or persistent psia; history or presence of drug allergy; blood sias; renal, hepatic or cardiac dysfunction; ension; thyroid disease; systemic edema; titis and salivary gland enlargement due to the polymyalgia rheumatica and temporal arteritis; nts receiving other potent chemotherapeutic s, or long-term anticoagulant therapy.

ings: Age, weight, dosage, duration of therapy, nce of concomitant diseases, and concurrent t chemotherapy affect incidence of toxic reac- Carefully instruct and observe the individual t, especially the aging (forty years and over) ave increased susceptibility to the toxicity of the Use lowest effective dosage. Weigh initially dictable benefits against potential risk of severe, atal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

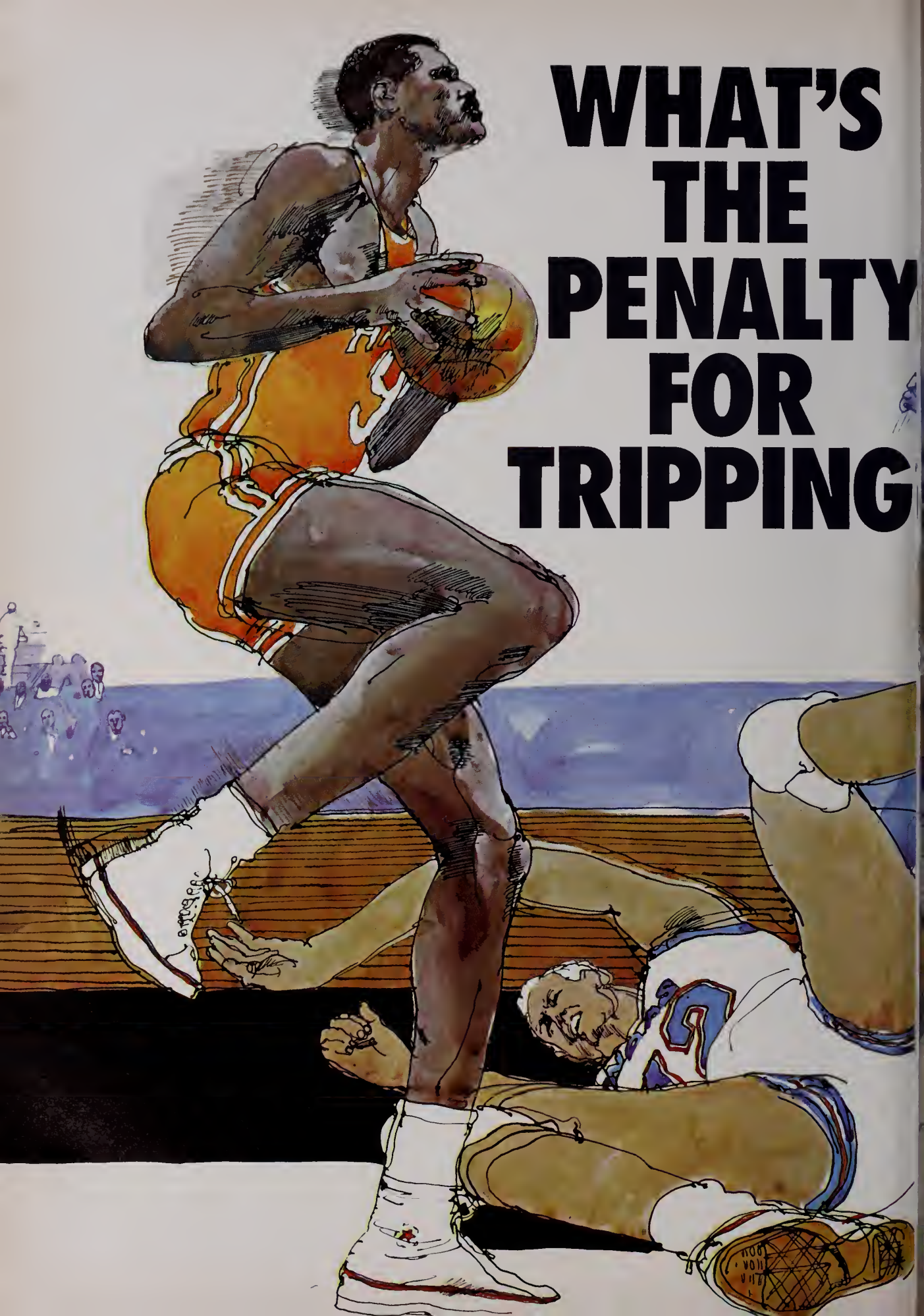
Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

(B) 98-146-800-E

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

TA. 8356-9


WHAT'S
THE
PENALTY
FOR
TRIPPING



A personal foul against the tripper, and possibly weeks of painful skeletal muscle spasm for the victim.

For the skeletal muscle spasm of leg strains, Valium® (diazepam) can be a valuable adjunct. A dose of 2-10 mg, three or four times a day, goes to work to help break up the cycle of spasm/pain/spasm. The resultant relief of skeletal muscle spasm may permit greater mobilization of the affected muscles and may help the patient resume usual activities sooner than otherwise possible.



Sudden trauma to and unusual stress on sartorius muscle may cause strain of muscle and tearing of some of the fibers. The resultant muscle spasm can make leg motion painful.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

VALIUM® (diazepam)

adjunct in skeletal muscle spasm

2-mg, 5-mg, 10-mg tablets

To get the water out in edema*

To lower blood pressure in hypertension*

To spare potassium in both

There's

Trademark

Dyazide®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

***Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome, late pregnancy; also steroid-induced and idiopathic edema, and edema resistant to other diuretic therapy. 'Dyazide' is also indicated in the treatment of mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., certain elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—they can both cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

SK&F CO.
Carolina, P.R. 00630
a subsidiary of Smith Kline & French Laboratories

DZ-106

Mylanta®
24 million hours a day.

Through the day, every day,
ulcer patients take
one million doses of Mylanta
for relief of ulcer pain.



Mylanta®
LIQUID/TABLETS
aluminum and magnesium hydroxides plus simethicone

Good taste = patient acceptance
Relieves G.I. gas distress*
Non-constipating

*with the defoaming action of simethicone

Stuart PHARMACEUTICALS Pasadena, Calif. 91109
Division of Atlas Chemical Industries, Inc., Wilmington, Del. 19899



a new outlook in chronic pain

of moderate to severe intensity

Though Talwin® can be compared to codeine in analgesic efficacy, it is not a narcotic. So patients receiving Talwin for prolonged periods face fewer of the consequences you've come to expect with narcotic analgesics. And that, in the long run, can mean a better outlook for your chronic-pain patient.

Talwin Tablets are:

- **Comparable to codeine in analgesic efficacy:** one 50 mg. Talwin Tablet appears equivalent in analgesic effect to 60 mg. (1 gr.) of codeine. Onset of significant analgesia usually occurs within 15 to 30 minutes. Analgesia is usually maintained for 3 hours or longer.
- **Tolerance not a problem:** tolerance to the analgesic effect of Talwin Tablets has not been reported, and no significant changes in clinical laboratory parameters attributable to the drug have been reported.
- **Dependence rarely a problem:** during three years of wide clinical use, only a few cases of dependence have been reported. In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.
- **Not subject to narcotic controls:** convenient to prescribe—day or night—even by phone.
- **Generally well tolerated by most patients:** infrequently cause decrease in blood pressure or tachycardia; rarely cause respiratory depression or urinary retention; seldom cause diarrhea or constipation. If dizziness, lightheadedness, nausea or vomiting are encountered, these effects tend to be self-limiting and to decrease after the first few doses. (See last page of this advertisement for a complete discussion of adverse reactions and a brief discussion of other Prescribing Information.)

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic

a new outlook in chronic pain

of moderate to severe intensity



Contraindications: Talwin, brand of pentazocine (as hydrochloride), should not be administered to patients who are hypersensitive to it.

Warnings: *Head Injury and Increased Intracranial Pressure.* The respiratory depressant effects of Talwin and its potential for elevating cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a preexisting increase in intracranial pressure. Furthermore, Talwin can produce effects which may obscure the clinical course of patients with head injuries. In such patients, Talwin must be used with extreme caution and only if its use is deemed essential.

Usage in Pregnancy. Safe use of Talwin during pregnancy (other than labor) has not been established. Animal reproduction studies have not demonstrated teratogenic or embryotoxic effects. However, Talwin should be administered to pregnant patients (other than labor) only when, in the judgment of the physician, the potential benefits outweigh the possible hazards. Patients receiving Talwin during labor have experienced no adverse effects other than those that occur with commonly used analgesics. Talwin should be used with caution in women delivering premature infants.

Drug Dependence. There have been instances of psychological and physical dependence on parenteral Talwin in patients with a history of drug abuse and, rarely, in patients without such a history. Abrupt discontinuance following the extended use of parenteral Talwin has resulted in withdrawal symptoms. There have been a few reports of dependence and of withdrawal symptoms with orally administered Talwin. Patients with a history of drug dependence should be under close supervision while receiving Talwin orally.

In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.

Acute CNS Manifestations. Patients receiving therapeutic doses of Talwin have experienced, in rare instances, hallucinations (usually visual), disorientation, and confusion which have cleared spontaneously within a period of hours. The mechanism of this reaction is not known. Such patients should be very closely observed and vital signs checked. If the drug is reinstituted it should be done with caution since the acute CNS manifestations may recur.

Usage in Children. Because clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Precautions: *Certain Respiratory Conditions.* Although respiratory depression has rarely been reported after oral administration of Talwin, the drug should be administered with caution to patients with respiratory depression from any cause, severe bronchial asthma and other obstructive respiratory conditions, or cyanosis.

Impaired Renal or Hepatic Function. Decreased metabolism of the drug by the liver in extensive liver disease may predispose to accentuation of side effects. Although laboratory tests have not indicated that Talwin causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment.

Myocardial Infarction. As with all drugs, Talwin should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects of Talwin on the sphincter of Oddi, the drug should be used caution in patients about to undergo surgery of the biliary

Patients Receiving Narcotics. Talwin is a mild narcotic antag Some patients previously receiving narcotics have experience withdrawal symptoms after receiving Talwin.

CNS Effect. Caution should be used when Talwin is adminis to patients prone to seizures; seizures have occurred in a few patients in association with the use of Talwin although no caus effect relationship has been established.

Adverse Reactions: Reactions reported after oral administ of Talwin include *gastrointestinal:* nausea, vomiting; infrequ constipation; and rarely abdominal distress, anorexia, dia *CNS effects:* dizziness, lightheadedness, sedation, euphoria, ache; infrequently weakness, disturbed dreams, insomnia, sy visual blurring and focusing difficulty, hallucinations (see *CNS Manifestations* under WARNINGS); and rarely tremor tability, excitement, tinnitus. *Autonomic:* sweating; infrequ flushing; and rarely chills. *Allergic:* infrequently rash; and u urticaria, edema of the face. *Cardiovascular:* infrequently dec in blood pressure, tachycardia. *Other:* rarely respiratory depre urinary retention.

Dosage and Administration: *Adults.* The usual initial adult d 1 tablet (50 mg.) every three or four hours. This may be inc to 2 tablets (100 mg.) when needed. Total daily dosage shoul exceed 600 mg.

When antiinflammatory or antipyretic effects are desired in tion to analgesia, aspirin can be administered concomitantly Talwin.

Children Under 12 Years of Age. Since clinical experience in dren under 12 years of age is limited, administration of Talw this age group is not recommended.

Duration of Therapy. Patients with chronic pain who have re Talwin orally for prolonged periods have not experienced drawal symptoms even when administration was abruptly d tinued (see WARNINGS). No tolerance to the analgesic effe been observed. Laboratory tests of blood and urine and of live kidney function have revealed no significant abnormalities prolonged administration of Talwin.

Overdosage: *Manifestations.* Clinical experience with Talwin dosage has been insufficient to define the signs of this condition *Treatment.* Oxygen, intravenous fluids, vasopressors, and supportive measures should be employed as indicated. Assist controlled ventilation should also be considered. Although n phine and levallorphan are *not* effective antidotes for respir depression due to overdosage or unusual sensitivity to Talwin enteral naloxone (Narcan®, available through Endo Laboratori a specific and effective antagonist. If naloxone is not available enteral administration of the analeptic, methylphenidate (Rita may be of value if respiratory depression occurs.

Talwin is not subject to narcotic controls.

How Supplied: Tablets, peach color, scored. Each tablet co Talwin (brand of pentazocine) as hydrochloride equivalent to 5 base. Bottles of 100.

Winthrop Winthrop Laboratories, New York, N. Y. 10016 (1

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic



1971 Kentucky Blue Shield® Report

Membership

	1970	1971
Total Membership	1,089,017	1,148,560
Net Enrollment Gain (Members)	45,536	59,543
Percent of Net Increase Over Previous Year	4.36%	5.46%
New Employee Groups Enrolled	1,305	1,151

Claims Experience

	Number of claims paid		Amount paid to Kentucky Physicians For Member Services	
	1970	1971	1970	1971
Indemnity Contracts	225,188	242,649	$ 9,571,647	$10,712,962
Usual and Customary Contracts	90,977	101,651*	4,416,433	5,325,182
Totals	**316,165**	**344,300**	**$13,988,080**	**$16,038,144**
Amount paid to Kentucky Physicians for services covered by Extended Benefits, Blue Cross and Blue Shield-65, Major Medical and F.E.P. Supplemental Contracts			2,822,487	3,437,187
Grand Total Paid to Kentucky Physicians			**$16,810,567**	**$19,475,331**

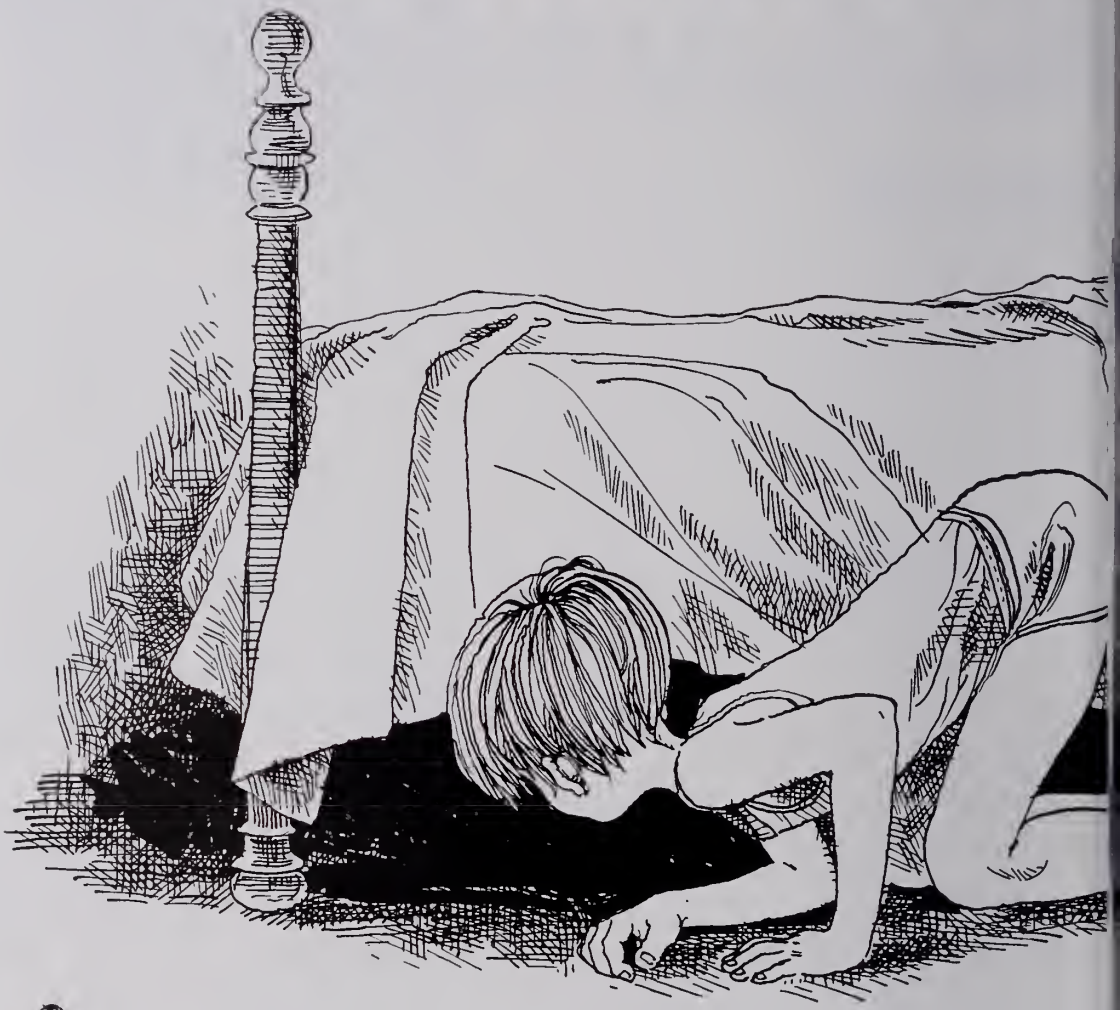
Kentucky BLUE SHIELD®

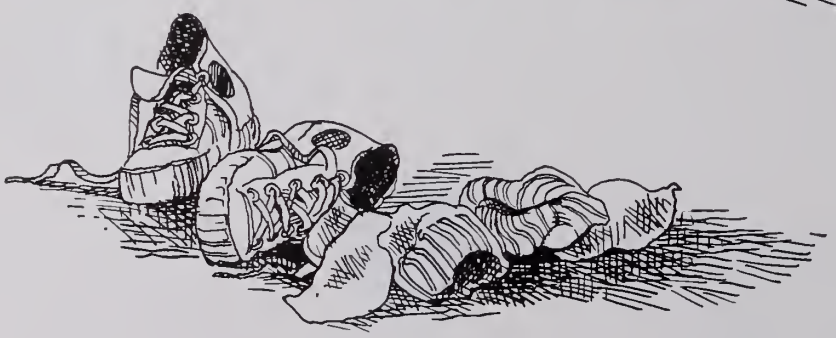
Kentucky Physicians Mutual, Inc.
3101 Bardstown Road Louisville, Ky. 40205 (502) 452-1511
Helping Kentuckians Prepay The Cost of Health Care

*219, seventeen-one hundredths of 1% of claims submitted, required Peer Review

® National Association of Blue Shield Plans

Arthur los





A single-dose, non-staining anthelm

is pinworms...



with just one non-staining dose of Antiminth (pyrantel pamoate) Oral Suspension.

Highly effective. Active against pinworm...and roundworm.

Non-staining. Doesn't stain teeth or oral mucosa on ingestion. Doesn't stain stools, clothing or linen.

Simple dosage. Single-dose regimen: 1 cc. per 10 lbs. of body weight (1 tsp. per 50 lbs.)

Well-tolerated. Based on pre-introductory studies.

Pleasant-tasting. Easy-to-take, caramel-flavored oral suspension.

Economical. One prescription for the entire family.

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia.

Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lbs. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml., supplied in 60 cc. bottles.

ent: **new ANTIMINTH®**

(pyrantel pamoate)

equivalent to 50 mg pyrantel/ml

ORAL SUSPENSION

ROERIG Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017



Now in a 200-ml. Unbreakable Plastic Bottle

Same price as 150-ml. size*

Two dosage strengths– 125 mg./5 ml. and 250 mg./5 ml.

V-Cillin K®, Pediatric

potassium phenoxymethyl penicillin

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Pesticides and Human Poisoning†

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The several classes of pesticides are briefly described, with examples. The newer, synthetic organic pesticides are discussed in detail, with recommendations as to diagnosis and treatment. The subject of poisoning in general is discussed.

PESTICIDES are materials which are used to eliminate or control other living organisms which man considers to be detrimental to his well-being. The term ordinarily refers to insecticides, rodenticides, and herbicides. I will briefly discuss rodenticides, inorganic poisons, natural organic pesticides, fungicides, and biological pesticides.

Rodenticides are represented by Warfarin, which is a chemical similar to the drug Coumadin which you use in your medical practice. This material is extremely active in rodents, causing them to bleed internally and seek water. In this manner, the rodents disappear from their usual haunts and are found dead near bodies of water.

Inorganic poisons are represented by such materials as lead arsenate, fluoride salts, thalium, selenium, mercury, phosphorus, and cyanide.

The natural organic pesticides are represented by such materials as rotenone, nicotine, and squill.

Fungicides include mercury compounds, copper compounds, pentachlorophenol, dithiocarbamates, hexachlorobenzine, etc.

Biological pesticides, in my view, are very exciting; and from an ecological standpoint, they offer the greatest promise. The most recent example of this is the work done in the control of the screwworm fly larva, in which many millions of male screwworm flies were sterilized and released, resulting in almost complete eradication of the screwworm problem in certain areas of the South. Some recent, very exciting work has been done at Harvard on insect juvenile hormones. These hormones prevent the insect from maturing into an adult. At the moment, this method is species specific, but it shows tremendous promise.

My discussion from here on will be limited to the synthetic organic chemicals used as insecticides and herbicides. Fortunately, the most toxic materials are not available in the garden and home shop; however, those of you who work in or near farming communities may be called upon to treat a case of poisoning where the more toxic materials have been used.

First, there are the insecticides. These can be grouped as follows:

A. Chlorinated hydrocarbons
B. Phosphate Esters
C. Carbamates

Chlorinated Hydrocarbons

Representative compounds are DDT, Chlordane, Lindane, and Dieldrin. These compounds

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are fat soluble and, while not water soluble, traces do go into solution many weeks after application. They are very persistent, remaining in the environment for years, and are therefore the subject of much concern at the present time. Because they are fat soluble, when absorbed, they are stored in the body fat. Although they are basically similar and are grouped together, they have wide variations in chemical structure and pharmacological activity. These compounds act on the central nervous system, but the exact mechanism is not fully known. Large doses produce nausea, vomiting, and diarrhea, restlessness, hyperirritability, muscle spasms, tremors, and convulsions. These are all signs of central nervous stimulation. These symptoms are followed by depression, collapse, cyanosis, and eventual death due to respiratory failure. The amount stored in the fat is largely inactive and is eliminated very slowly.

Treatment

Treatment consists of removal of poison, if possible. This can be done by gastric lavage, induced vomiting, and saline laxatives. Do not use oil laxatives, as they may increase absorption. It is also very important to remove the material from the skin with soap and water. In cases of severe poisoning, sedation is usually necessary. This can best be done by barbiturates and may require large doses over a period of up to two weeks. Phenobarbital can be used up to .7 g daily, Pentobarbital up to .25 to .5 g daily. Possibly calcium gluconate may be helpful. In all cases, it is well to keep in mind that the solvent also may be toxic. If it is a refined kerosene or xylene, one must be aware of the danger of aspiration pneumonitis if vomiting is induced. Gastric lavage is safer, especially if done using an intra-tracheal tube with an inflated balloon. There are no specific antidotes to these materials.

Phosphate Esters

Representatives of phosphate esters are Parathion, TEPP, Diazinon, Dimethoate, Malathion, and Phosdrin. These compounds are relatively new and were derived from World War II war gases. They have only one pharmacological action, and that is irreversible suppression of the enzyme cholinesterase, thus resulting in accumulation of unhydrolized acetylcholine. The signs and symptoms of poisoning are intense stimulation of structures innervated by the parasympathetic nerves — weakness, blurred vision, and a sense of constriction in the chest. These are followed by vomiting, abdominal cramps, diarrhea, salivation, lacrimation, profuse sweating, tremors, difficulty in breathing, pinpoint and nonreacting pupils, and excessive accumulation of secretions in the respiratory tract.

The commercial compounds vary widely in their toxicity, TEPP being about the most toxic, with an oral LD 50 of 1.05 mg/kg (in rats). Malathion is about the least toxic, with an LD 50 of 1375 mg/kg. These compounds are absorbed by all routes. Repeated small exposures may reduce the cholinesterase activity to dangerous levels without symptoms. Severe symptoms then can occur after a relatively small dose. Workers exposed to these materials should have prior cholinesterase tests made, and these should be repeated at frequent intervals. Once a base level is established, any significant decrease should result in either removal of the employee from exposure or tightening of safety precautions. Values 50% or less of preexposure tests should result in immediate removal from exposure. No further exposure should be allowed, as the patient may remain susceptible to very small doses.

Treatment

The simplest treatment of any insecticide poisoning consists of the rapid administration of atropine in *large* doses — 2-4 mg intravenously repeated at 5-10 minute intervals until signs of atropinization occur. It is amazing how much atropine a poisoned patient can tolerate. If the patient is cyanotic, artificial respiration should be started immediately, and atropine administration should *not* be delayed until cyanosis is overcome. You may overcome the cyanosis, but the patient may die in the meantime from the effects of the poison. The drug 2 PAM is useful for poisoning by certain compounds — mainly Parathion, but should *never* be used alone, always with atropine. In addition to this, it is not as readily available

as is atropine. It is difficult to convince the average physician to use such large doses of atropine. But once he has used it on one of these cases, he is forever convinced.

If atropine is used at all, the patient must be closely observed for 24-48 hours. The atropine is quickly used up and the symptoms can reappear with dramatic suddenness. Atropine should *never* be used prophylactically, although this has been recommended. Strict safety precautions and suitable arrangements for knowledgeable and prompt medical care are much safer. In addition, the dosage used in the normal tablet form of atropine is entirely too small to have any beneficial effect. Our experience has been, in situations where employees have been given atropine tablets, they will tend to "pop" them like Aspirin for every ache and pain they have, assuming that the difficulty is due to the material with which they are working.

As far as we know at the present time, there are no other pharmacological actions of these compounds. Once the cholinesterase activity has reached its normal level, recovery is apparently complete.

In treating a patient acutely poisoned, it is very important to de-contaminate his skin, hair, nails, clothing, etc. It is also extremely important to make sure that *you* do not get poisoned from the material on his clothes and body.

Carbamates

Representatives of the Carbamates are Carbaryl or Sevin, and Bux. These compounds act similar to phosphate esters; but the cholinesterase inhibition is reversible, and fairly rapid. Therefore, a cholinesterase test is not too useful. Large amounts of beta-Naphthol in the urine should make one suspicious of Sevin poisoning. The symptoms are not as severe as those with organic phosphate intoxication.

Treatment

Treatment is identical with that of organic phosphate poisoning; however, 2 PAM is contraindicated and may be actually harmful. It is important to note that some products now contain both organic phosphates and carbamates.

Herbicides

There are many different materials used for herbicides, from petroleum distillates to Paraquat and Diquat. Two-four-D and 2,4,5-T are much in the news today. These are chlorinated phenoxyacetic acid salts and esters, and if ingested, may cause a myotonia-like state and ventricular fibrillation. Quinidine may be necessary. Removal of the material from the alimentary tract and skin, and symptomatic treatment is all that is usually required.

The quaternary ammonia compounds Paraquat and Diquat are quite new, and these are absorbed by all routes. Nasal bleeding may occur from inhaling Paraquat mist, and damage to the nails has also been reported. This compound has a very unique property. It is corrosive to mucous membranes; but after absorption and elimination through the kidney, an intense reaction occurs in the lung. This occurs possibly two to four weeks after ingestion, even though the material has completely, or almost completely, been eliminated from the body. The damage is dose-related and consists of inflammation, congestion, hemorrhage, edema, and fibrous consolidation of the lung. This is irreversible. To date, all of the patients who have swallowed this material in any appreciable amount have died from the lung complication. There is no antidote. Diquat is less toxic and does not cause the lung complication, but is reported to cause cataracts.

In closing, I would like to say a few words about "poisoning." Practically every chemical to which we are exposed can, under certain circumstances cause death. For instance, water is fatal if you get it in a certain way. Pesticides are deadly poisons, they are used to poison other organisms. People must be made to understand this and must be made to realize that these are extremely dangerous and should be handled carefully.

Pesticides do not poison people. People poison themselves and other people by either intent, ignorance, or gross carelessness. The bottle sits up there on the shelf, not harming anyone, until some idiot comes along and opens

it up. That is when the trouble starts. The manufacturer puts a lot of careful thought into designing the label, which nobody reads. The government is now compounding the problem by requiring much more information on the label in the future, trying thereby to protect us from our own stupidity, which, I'm sure, is impossible.

I would like to ask the following question: When you last bought a bottle of insecticide at your local garden shop, how many of you read the entire label and completely understood it *before* you took the cap off?

Most people are only interested in what insect it will control and how much per gallon of water to use. Many don't even bother with this last instruction. "If a little is good, more is better." Precautions are ignored; "it is too much bother!" Because the stuff is expensive, if one doesn't use up all one has mixed, one is reluctant to throw it out. So it is put into a Coke bottle and left in the garage for some little child to stumble over and drink. I receive calls day after day from all over the country, with just such information; and it is enough to give one nightmares.

In treating cases of poisoning, try to get the patient to bring in the bottle so you can read the label. Then have someone contact the nearest poison control center for the latest information on treatment of the ingredients which will be listed on the label. Remember, brand names may go on for a long time, but ingredients may change from time to time.

In Summary

It is an unfortunate fact that some doctors, when confronted with a patient with a series of obscure symptoms, discover that the patient has been using a toxic chemical, will assume that this chemical is responsible for his symptoms, and will stop the investigation at that point. Certainly, the possibility should be considered; however, the doctor should make absolutely certain that the material in question could cause the symptoms of which the patient complains and also that there has been sufficient exposure.

Insecticides are deadly poison . . .

Remove the poison, if possible . . .

Use whatever antidote is available . . .

Treat the symptoms . . .

Watch the patient carefully . . .

Try to instill respect for these materials in your patients.

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Regional Analgesia: Anesthesia for Vaginal Delivery

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Regional block techniques for labor and delivery are presented. Paracervical and pudendal blocks are the easiest and safest. Peridural and spinal anesthesia should be administered by qualified personnel. A qualified anesthetist should attend all deliveries.

REGIONAL anesthetic techniques are often used to produce obstetrical analgesia and anesthesia on the assumption that the fetus and mother will rarely be harmed. It is also frequently assumed that with these methods many of the undesirable depressant effects of narcotic analgesia and general anesthesia can be avoided and that adverse effects will result only from maternal anesthetic complications such as convulsions, apnea, or hypotension which may cause fetal hypoxia

For these reasons, regional anesthesia is frequently recommended for patients with distressed babies. However, regional anesthetics may produce direct adverse effects on the fetus. There can be no greater tragedy than satisfactory analgesia or anesthesia for the mother which results in compromise or death for her baby.

A review of anatomical, theoretical, and technical considerations necessary for safe and effective use of regional analgesia and anesthesia is presented.

Pelvic and Uterine Nerve Pathways

Pain impulses characteristic of the first stage of labor are due primarily to dilation of the cervix and possibly to uterine contractions.[1, 2] These pain impulses are transmitted via the many visceral afferent nerve fibers in the cervix. These nerve fibers course through the pelvic plexus located within the base of the broad ligament on either side of the cervix, sweep around the pelvis within the broad ligaments, and cross the pelvic brim in the superior hypogastric (presacral) plexus. They then pass through the lumbar and thoracic paravertebral sympathetic chain to join a spinal nerve and enter the cord with the tenth, eleventh, or twelfth thoracic nerves. Relief of pain in the first stage of labor can be provided by blocking these tracts anywhere in their course. This often is done at the pelvic plexus with bilateral paracervical blocks. Less commonly (but equally effective), blockade of the tenth, eleventh, and twelfth thoracic spinal nerves is accomplished in the peridural (epidural, extradural) space.

Pain during the second stage of labor is caused by stretching of the birth canal and perineum. Pain impulses originating in the perineum, vulva, and lower third of the vagina are transmitted centrally over one of the three main branches of the pudendal nerve and the pudendal nerve itself. Pain impulses are conducted proximally (via the pudendal nerve) through the greater sciatic foramen, to course the pelvis and enter the spinal cord by way of the anterior primary divisions of the second, third, and fourth sacral nerves. The pudendal nerve itself (with artery and vein) is conveniently located in the pudendal (Alcock's) canal at the posterior inferior border of the ischial spine and sacrospinous ligament.

Relief of the pain of vaginal delivery can be provided by interrupting these pathways, done by pudendal nerve block, peridural (epidural) block, or subarachnoid (low spinal) block. Transvaginal pudendal nerve block does not block all of the nerves of the female perineum. However, "local infiltration of the labia majora from the middle of the labia majora to the

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mons pubis to block the ilioinguinal and genitofemoral nerves need not be done."[3] If omitted, the patient may have slight discomfort as the head of the infant passes the labia.

Regional Anesthesia Types

Paracervical Block (Figure 1)

Paracervical block[3, 4, 9] is usually administered by the obstetrician and used for analgesia during labor. Paracervical block provides good relief of pain, is easily available, and is relatively safe. If administered properly during the accelerated phase of labor, paracervical block will usually hasten labor. However, if administered during the latent phase, it is our impression that the latent phase is prolonged.

Paracervical block is administered transvaginally by injecting a local anesthetic into the paracervical area lateral to the cervix (3 and 9 o'clock). A metal guide is placed into either lateral vaginal fornix and a needle passed through it to a depth of 1 to 1½ cm into the base of the broad ligament. Aspiration should be done before injection to avoid intravascular injection. Anesthesia is noticeable within a few minutes and has a duration of 45 to 90 minutes, depending on dose. Two or three injections sites should be used on either side to avoid rapid absorption or intravascular injection.



FIGURE 1. Paracervical Block
Reproduced with permission of the artist, Mr. Elliot Hermen, and Astra Pharmaceutical Products, Inc. Worchester, Mass.

The anesthetic agent most commonly used for paracervical block is mepivacaine (Carbocaine®) 0.5% - 0.75%. Mepivacaine itself produces mild local vasoconstriction and lasts as long as lidocaine with epinephrine. Epinephrine is not recommended because of potential systemic effects on circulation and uterine contractility. Ten ml of solution is injected into each side with a delay of five minutes between sides.

The mother and fetus must be monitored during this delay in order to detect the consequences of high blood levels of local anesthetics. If such consequences do occur, injection of the second side may be delayed. This regimen of injection provides a dose of 100-150 mg of mepivacaine. The block may be repeated as necessary.

Toxic reactions, including convulsions in the mother, as well as depression of the fetus, have been reported[5] and attributed to the cumulative effect of repeated doses of local anesthetic agents. For this reason, a total dose of 1000 mg of mepivacaine should not be exceeded during the entire course of labor and delivery.[5] The maximum dose includes that amount of drug used for pudendal and/or peridural block.

The primary complication of paracervical block is fetal bradycardia, which is diagnosed in 10-15% of cases.[6] Since bradycardia is detected by auscultation, it may occur as often as 20-25% of the time and simply not be noticed. It apparently occurs either as a result of direct intravenous injection of the drug within the broad ligament or of unusually rapid absorption by the mother.[7] Under such circumstances, the bolus of drug will reach the heart and return via the uterine arteries to the placenta within one or two circulation times (15-30 seconds). Uterine blood flow represents 20% of cardiac output at term pregnancy, so a large portion of the injected drug is available for transfer to the fetus. Fetal circulatory depression caused by the drug is the apparent cause of bradycardia.

The proper treatment is oxygen (by mask or nasal catheter) to the mother and time to

allow equilibration of the drug within mother's blood stream, with subsequent transplacental transfer of the drug from fetus back to mother.[8] As long as bradycardia is not below 60-80/min and is improving, nothing more need be done. If delivery cannot be delayed to permit such transfer, gastric lavage of the infant after delivery will hasten removal of the drug.

It is conceivable that inadvertent injection of the local anesthetic agent directly into the fetal presenting part may occur. Care must be exercised to avoid this misadventure. Fetal safety with paracervical block, as well as pudendal, peridural, and low spinal blocks, can be improved with the use of intrauterine fetal monitoring devices. These consist of transcervical, intra-amniotic catheters to measure intrauterine pressures and clip electrodes on the fetal presenting part for recording fetal heart rate. Considerable technical practice and skill at interpretation are necessary for good results. However, with these devices, inappropriate anesthesia can be avoided for babies already in jeopardy, and accurate, quick diagnosis of fetal distress following block can be obtained. Fetal salvage should be improved.

Pudendal Block (Figure 2)

Pudendal block[3, 4, 9] is usually administered by the obstetrician to provide pain relief for simple low forceps, outlet forceps, or for normal spontaneous deliveries and episiotomy. Pudendal block will not provide anesthesia sufficient for major operative deliveries.

Pudendal block is performed transvaginally through a guide placed just posterior and inferior to each ischial spine.[4] The needle is advanced to 1 to 1½ cm beyond the guide tip to the area of the pudendal nerve. Aspiration must be performed to avoid intravascular injection.

Mepivacaine (Carbocaine®) or lidocaine (Xylocaine®), without epinephrine, is used most commonly as the anesthetic agent for pudendal block. Ten ml of 1%-1.5% solution is injected into each side, with a delay of five minutes between sides. This represents a total dose of 200-300 mg of anesthetic agent. It may be necessary to re-inject to secure a block, and this additional drug dose requires consideration. A total dose of 1000 mg of mepivacaine and/or lidocaine should not be exceeded during the course of labor and delivery.[5]



FIGURE 2. Pudendal Block

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We recommend that a qualified anesthetist be at the head of the table to provide further analgesia (e.g. nitrous oxide) if necessary and to monitor the patient's further needs. The incidence of vomiting during the bearing down effort accompanying spontaneous delivery is high enough that safety dictates a qualified person available for protection from aspiration and resuscitation if needed.

Peridural Anesthesia

Continuous peridural (epidural) anesthesia[3, 9] or analgesia has the advantage that it may be given early in labor to provide analgesia during labor and anesthesia for delivery. Peridural anesthesia must be given by a qualified anesthetist and requires continuous attendance by the anesthetist during the course of labor and delivery. If properly timed by the obstetrician so that the acceleration phase of labor has truly been reached at 4 to 5 cm dilatation, peridural anesthesia often will hasten the

process of labor. However, if administered prior to the accelerated phase of labor, during the prodromal or latent phase, peridural anesthesia may prolong the latent phase and cause difficulties due to the large dose of drugs used. If timing is inappropriate, the obstetrician must augment labor with oxytocin.

The use of peridural anesthesia may force mid forceps delivery. If the fetal head is in a posterior or transverse position, relaxation of pelvic musculature provided by this anesthetic agent may remove the fulcrum against which the head would ordinarily rotate, causing descent in an abnormal position requiring operative rotation for delivery. In some instances, descent may not take place without prior rotation. If the obstetrician is not willing or is unable to do a mid forceps delivery, then selection of the patient for peridural analgesia must be particularly accurate so as to avoid this problem.

Spinal headache is not associated with peridural anesthesia unless the dura is inadvertently punctured during administration. There is a potential 10-15% failure rate in caudal peridural anesthesia due to anatomical abnormalities. "Approximately 20 to 25% of patients have deformities of the sacrum . . . 5% of these deformities prevent insertion of the needle into the caudal canal."[3] Post partum bladder distention is a frequent problem, as the patient cannot sense bladder distention and is unable to void spontaneously. An indwelling urinary catheter may be required. Techniques for continuous or single-shot peridural analgesia are described in standard texts (Bonica,[9] Moore[3]).

Low Spinal Anesthesia

Low spinal anesthesia (T10 dermatome) provides excellent pain relief and relaxation of pelvic skeletal musculature, and is quite satisfactory for most operative deliveries. It will not provide the uterine relaxation necessary for intrauterine manipulation, making it unsuitable for internal podalic version or total breech extraction.

Commonly used drugs for single dose subarachnoid block produce anesthesia lasting from 30 minutes (procaine) to 2½ hours (tetracaine). For this reason, spinal anesthesia usually is not administered until delivery is imminent. Thus, the primigravida must be in the second stage with the head on the pelvic floor while the multigravida in rapidly progressing labor may be given spinal anesthesia when the cervix is 8 or 9 cm dilated if the head may be expected to reach the pelvic floor within the next few minutes. Indicated mid forceps delivery may also be accomplished under spinal anesthesia.

The most common immediate serious complication of spinal anesthesia is maternal hypotension.[10] In addition to the usual mechanism of blood pooling in dilated vascular beds, the parturient adds the mechanism of inferior vena caval compression. Hypotension may be prevented by rapid "preloading" with 500 ml Hartmann's solution (without dextrose) IV and displacement of the uterus to the left. If 5% dextrose in Hartmann's solution (or other crystalline solutions) is administered rapidly, osmotic diuresis occurs to produce important losses of water, sodium, and potassium. Treatment of hypotension includes administration of 100% oxygen by mask and ephedrine 10-20 mg IV.[11] Other vasopressors may increase maternal arterial pressure, but at the expense of placental perfusion, leading to further fetal acidosis.

Spinal anesthesia should be administered only by a physician who is competent to assess its level and its effects on both mother and fetus and to treat complications should they arise. Ideally, this means that spinal anesthesia should be administered only by an anesthesiologist. However, many qualified obstetricians are able to perform these duties. The obstetrician cannot resuscitate mother, however, if he is involved in delivering the infant. Therefore, the use of spinal anesthesia requires a qualified second individual, either nurse anesthetist or anesthesiologist to be available to monitor the patient while the obstetrician performs the delivery.

The most common delayed complication of spinal anesthesia is headache, having an incidence of about 10% and varying from mild to severe. Hospitalization may be prolonged by headache. In addition to the usual treatment with analgesics and hydration (at least 4 liters per day), a tight abdominal binder over

an inflatable balloon is useful. The balloon is inflated except when the patient is recumbent.

Techniques and drug dosages used for low spinal anesthesia may be found in standard texts (Bonica,[9] Moore[3]).

Summary

Regional analgesia methods for obstetric use are presented. Paracervical, pudendal block are easiest, relatively safe. Peridural, spinal anesthesia are discussed, to be given only by qualified anesthetist. A qualified anesthetist should attend all deliveries.

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The Etiology and Therapy of Pruritus Ani†

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Pruritis Ani can be controlled and in many cases permanently cured. The described therapy has afforded such results.

PRURITUS ani is a definite disease entity which has confused the medical profession for many decades. A major obstacle in appreciating the character of the disease is the fact that it is produced by any one of a large group of factors. Many mistruths and half truths have been handed down by various texts and tradition, and this has retarded a dissemination of the understanding and therapy of pruritus ani.

Diet has been accused of being an etiological factor in the past. Time has proved this to be most dubious. Colored toilet tissue has been another favorite as to causation, but this again is most questionable. Tatooing with an electric tatooing machine was employed in the treatment of pruritus ani in the past. The well-known and well-advertised expression "itching piles" is a misnomer and is a product of the advertising profession. In reality, such cases are hemorrhoids combined with pruritus ani. Many physicians assume the disease to be uniformly due to a fungus. This is not true.

Pruritus ani is characterized by more or less continuous itching about the anal orifice, progressive in severity, often extending to the perineum, scortum, labia, and buttocks. Clinically, it begins as an inflammation type of process, but will eventually result in thickening of the dermis with crevice formation, or in other words, lichenification of the perianal skin.

This disease is most common. I published an article on pruritus ani in 1965 in the *Journal of the American Medical Association*. Requests for reprints were received from five continents and some thirty foreign countries. The Mayo Clinic states that 7% of all patients seen in the proctology service have pruritus ani.

Some years ago I composed a chart depicting the etiology of pruritus ani. It divided pruritus ani into two types. Primary pruritus ani is comprized of that group in which a meticulous study has failed to reveal any precipitating factor. This group is also termed idiopathic pruritus. Secondary pruritus ani is the type that occurs as a result of other pathological states. I mention this classification because of its completeness, but I now consider it of more academic value than clinical value.

Etiology of Pruritus Ani

Primary Pruritus Ani

Those cases in which a meticulous study has failed to reveal any precipitating factor are placed in this group. This group is also termed idiopathic pruritus ani.

Secondary Pruritus Ani

1. Parasitic Infestation
   a. Oxyuris vermicularis (pinworm)
   b. Saroptes scabiei (itch mite)
2. Fungus Infection
   a. Epidermiphytosis
   b. Antibiotic reaction
3. Allergy
   a. Coexists with hay fever and asthma
   b. Foods such as strawberries, shell fish, and alcohol
   c. Local irritants such as underwear and toilet tissue
4. Psychosomatic
   a. Chronic tense state in individuals under great pressure, occurs in men 2½ times more frequently than in women, occurs during years of greatest financial stress (fourth, fifth, and sixth decades of life).

†*Presented at the meeting of the Ohio Valley Proctologic Society, held in conjunction with the 1971 KMA Annual Meeting, September 21*

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5. Digestive
   a. Achylia gastrica
   b. Highly alkaline stool predisposes to pruritus ani (doubtful).
   c. Cholecystic disease—has disappeared in some instances after cholecystectomy for a calculous gallbladder; most common cause of anacidity is gallbladder disease (doubtful).
6. Vitamin Deficiency
   a. Pellagra
   b. Vitamins B and A—occurs in diseases associated with these two deficiencies.
7. Endocrine
   a. Female menopause—seen in association with pruritus vulvae or alone, relieved by hormone therapy.
   b. Male menopause—seen in males of advancing years, aided with androgen therapy.
8. Vaginitis
   a. Chronic endocervicitis—the resultant leukorrhea acts as an irritant.
   b. Trichomonas vaginitis — leukorrhea acts as an irritant.
   c. Candida vaginitis—leukorrhea acts as an irritant.
9. Systemic Diseases
   a. Diabetes—especially noted for perianal irritation in the undiagnosed or untreated state.
10. Rectal Disease.
    This is undoubtedly the principal cause of secondary pruritus ani. The following conditions alone or in combination may cause pruritus ani:
    a. Hemorrhoids (so-called itching piles)
    b. Fissure in ano
    c. Discharge following rectal surgery

Virtually any rectal disorder may have pruritus as a symptom. Immediately one can conclude that if definite rectal disease is present, it must be eliminated before expecting a cure.

I will also give you the therapeutic chart corresponding to the etiological chart. I likewise consider this of more academic than clinical value.

The Treatment of Secondary Pruritus Ani

1. Parasitic Infestation
   a. Oxyuris vermicularis—enscals of gentian violet, also 2% aqueous solution of gentian violet in anal ampulla and perianal skin; pyrvinum pamoate (Povan) or piperazine is the drug of choice.
2. Fungus Infection
   a. Griseofulvin (Fulvicin) therapy orally
   b. Local therapy
3. Allergy
   Skin tests by a competent allergist may be indicated; frequently, the patient knows his idiosyncrasy; oral administration of antihistamines are of great value; this is a very small fraction of 1% of cases.
4. Psychosomatic
   Sulzberger (personal communication) has stated that psychiatry is a "sterile approach" to pruritus in most cases; I think he is correct; mild sedation for a limited period of time is of value.
5. Digestive
   Achylia gastica—glutamic acid hydrochloride (Acidulin) by mouth; Bacon[1] thinks a highly alkaline stool may be a precipitating factor; he advocates an acid-ash diet; this can be supplemented with buttermilk or a mixed culture of Lactobacillus acidophilus and L bulgaricus (Lactinex).
6. Vitamin Deficiency
   Pruritus has been noted in pellagra, therefore vitamin B complex administered intramuscularly has been advocated; oral administration of vitamin A in doses of 250,000 to 500,000 units daily, by mouth, with twice weekly injections of 50,000 units intramuscularly is recommended in cases of pruritus with leukoplakia of the anogenital area.
7. Endocrine
   Pruritus ani in women, at the natural or surgical menopause, frequently responds to intramuscular injection of 6,000 to 10,000 international units (IU) of estradiol benzolate twice weekly; an oral estrogen preparation (Menagen) (10,000

IU) by mouth nightly is also of value; androgen therapy in the male often is of value at or after the male climacteric; testosterone proprionate, 25 mg intramuscularly three times a week, and methyltesterone, 10 mg three times a day orally, are of value.

8. Vaginitis
   This is a common cause of secondary perianal and anal pruritis; a chronic endocervicitis with leukorrhea, Trichomonas vaginitis, Candida vaginitis, all cause pruritis at times; if the vaginitis is cleared up, the pruritus disappears.

9. Systemic Diseases
   A urinalysis and blood sugar determination is mandatory on every case of pruritus; the question of diabetes mellitus should be eliminated.

10. Pathological Disorders of the Rectum
    It is essential that all anorectal diseases be corrected.

There is a type of individual that is prone to develop pruritus ani. This is the same type of spastic patient who has been described as the ulcer patient. Frequently there is a history of a spastic gastro-intestinal tract. Again, there may be a history of functional headaches or migraine. Frequently, one finds the pruritic patient to have undergone a multiplicity of surgical procedures in the past. Often a history of personal tragedy is obtainable. Emotional stress and strain over the death of a loved one, children problems, divorce, financial problems are all too frequently noted in a history. However, the problem is definitely not a psychiatric one. This has been my experience, and Sulzberger (personal communication) has stated that psychiatry is a "sterile approach" to pruritus in most instances. I have treated several psychiatrists for pruritus ani.

In summing up this area, the patient who cares or is concerned is more apt to develop pruritus than the one who does not give a "tinker's damn" whether school keeps or not.

Over the past five years, a more concrete method of classification and therapy has evolved based on a personal experience of over 3,000 cases of pruritus ani. In general, any state which contributes to exposure of the perianal area to moisture must be considered an etiological factor.

My present concept of the etiological classification is as follows:

1. Mucous Colitis
   This includes the synonymous conditions of spastic colitis or irritable colon syndrome; it is characterized by a history of passing excessive mucous, scybalous stool, and emotional diarrhea; the mucous secretion is an irritant to the perianal skin.
2. Coccygodynia
   Characterized clinically by a sense of pressure in the rectum (as if a ball is there), a sense of incomplete evacuation and discomfort on sitting.
3. Post-Rectal Surgery Pruritus
   This type is one of the most common and occurs following rectal surgery even if the patient did not have pruritus before surgery, due to the postoperation anal discharge.
4. Antibiotic Pruritus
   This type, as the name indicates, follows by several weeks the administration of a broad spectrum antibiotic; one usually sees a large number of cases following an influenza outbreak.
5. Pruritus Ani of Vaginal Origin
   Every female with pruritus ani should have a vaginal examination to eliminate the presence of a pathological leukorrhea; trichomonas, moniliasis, and bacterial types may be present.
6. Anal Stenosis
   When an anal stenosis is present over a period of time, the evacuating process is limited; frequently, the patient resorts to laxatives or has many small bowel movements a day; in either instance, the perianal skin is bathed in fecal secretion; most stenoses are due to a previous faulty rectal procedure or a chronic fibrotic fissure in ano.
7. Prolapsing Hemorrhoids or Mucosal Prolapse
   Self-explanatory, for the maintainence of efficient anal hygiene is impossible.
8. Pruritus Ani Without Skin Changes
   This is the most difficult type to yield to therapy; it is the group described previously as being prone to pruritus; this

group consists of unhappy people often termed psychoneurotics.

Therapy

Regardless of the type of pruritus present, I have utilized what I have termed a standard treatment based on Prednisolone administration. It is supplemented, when necessary, by specific therapy for whichever of the eight etiological groups may be present. This has been effective in over 90% of cases. Prednisolone is administered orally over a 16 day period of time as follows:

5 mg 4 times a day after meals for 4 days and at bedtime

2½ mg 4 times a day after meals for 4 days and at bedtime

2½ mg 2 times a day after breakfast and supper for 4 days

2½ mg 1 time a day after breakfast for 4 days.

This schedule consumes 30, five mg tablets once, 16 days. The local therapy consists of 1% hydrocortisone alcohol creme massaged twice daily into the affected area for one minute. The creme is used twice daily for six months, then used once daily for six months. The oral course Prednisolone is repeated every two months for a total of three courses, then every three months for two courses. This adds up to one year.

The table of adjunct therapy for the eight etiological groups is as follows:

1. Mucous Colitis
   Anti-cholinergic drug plus diet, standard Prednisolone therapy.
2. Coccygodynia
   Muscle relaxant; I have found the average tranquilizer more efficient than the so-called muscle relaxant drugs; a wedge shape seating pad is essential; standard Prednisolone therapy.
3. Post-Rectal Surgery Pruritus
   Adequately controlled by a single course of the standard Prednisolone therapy.
4. Antibiotic Pruritus
   Standard Prednisolone therapy plus Mycostatin.
5. Pruritus Ani of Vaginal Origin
   Standard Prednisolone therapy plus Flagyl for trichomonas—mycostatin vaginal suppositories for moniliasis—surgery for chronic endocervicitis.
6. Anal Stenosis
   Standard Prednisolone therapy to return anal skin to normal, followed by corrective surgery.
7. Prolapsing Hemorrhoids or Mucosal Prolapse
   Standard Prednisolone therapy to return perianal skin to normal, followed by surgery.
8. Pruritus Ani Without Skin Changes
   Standard Prednisolone therapy with tranquilizer or mood elevant drug.
   No case is allowed to drink beer.

In conclusion, the standard course of Prednisolone therapy, oral and local, will control and cause regression of most cases of pruritus ani whether it be of primary or secondary origin. Recurrence is common and the patient should be so informed at time of discharge from initial treatment so that the patient's morale is not traumatized and follow-up treatment neglected.

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Medical Progress

Treatment of Parkinson's Disease

H. D. Jameson, M.D.*

I DIVIDE the management of Parkinson's syndrome into three major categories. The first is general medical care. The second is specific medicines for the neurologic symptoms. The third is counseling and support for the patient and the family.

Sluggish bowels or constipation is an almost universal complaint in people with Parkinson's syndrome, probably as part of the autonomic disturbance so commonly associated with bradykinesia. I know of nothing specific for this and use the vast array of emolients, bulks, and irritants without much success. Joint pains are extremely common, primarily due to the paucity of movement. "Arthritis" is the diagnosis often wrongly made. Improvement of mobility by specific therapy often helps very much. Inflammation of the eyelid margins, dry mouth, and urine retention are other common problems. I won't burden this essay with further comment on these important but ubiquitous problems.

Older Drugs

Of the three general groups of specific drugs for Parkinson's disease, the first includes the various synthetic belladonna preparations such as Kemadrin, Akineton, Artane, and Cogentin, and the antihistamines with anticholinergic side effects, such as Benedryl and Parsidol. These drugs are quite safe, are relatively inexpensive, and provide a great deal of benefit to some patients. I often use them as the first drugs, even though I am particularly interested in the use of 1-DOPA. I definitely do not stop them before starting 1-DOPA, although I usually reduce them over the next 6 to 12 months. The limiting factor on dose is such side effects as hallucinations, dry mouth, and urine retention. For a new patient who has not had any treatment for Parkinson's syndrome, and who does not specifically request 1-DOPA or who wants some immediate results, I will prescribe Artane, 2 mg three times a day, and Benadryl, 25 mg three times a day. If there are no side effects, I will increase the dose at two week intervals up to Artane, 12 to 15 mg daily total, and Benadryl, 100 to 150 mg daily total.

Levodopa

Much has been written and much literature is available to you on the use of 1-DOPA therapy for the treatment of Parkinson's disease.[1, 2] The two major drug companies who pioneered in the development and testing of 1-DOPA have provided us with many useful guide books and brochures to share with patients and their relatives.[3, 4] I do not agree with some of the things they say. Restriction of vitamin B-6 from the diet is nonsense. The optimal dose of 1-DOPA for a patient is not reached in six to eight weeks, rather six to eighteen months.

1-DOPA is an exciting drug. It is a good drug. It should be used more widely than it is now. Regulating the dose of 1-DOPA requires a little time. I recommend starting the infirm or elderly on 100 mg three times a day with meals. In the more vigorous patient, I usually start with 250 mg three times a day. At intervals of two to four weeks, I increase the dose by about 25%. An example is to start with 750 mg daily total, increasing at two week intervals to 1,000, 1,250 and, 1,500 mg and then at one month intervals to 2,000, 2,500, and finally to 3,000 mg per day after 4½ months of treatment. The maximum dose for

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1-DOPA varies widely. You have heard or read in the past about doses of six to ten grams per day at a cost of several dollars per day. In my experience, it is the rare patient who can tolerate over 4 grams per day continuously, and I have many patients experiencing optimal balance between benefit and side effects at 1,000 to 2,000 mg daily total.

A comment on cost is relevant. The wholesaler's price to the pharmacist in bulk quantities is now approximately 15 cents per gram. Thus, for the vast majority of patients the cost of this drug runs from 25 cents to a dollar per day. This is not insignificant, but certainly is no greater than the common stool softeners, urine antimicrobials, or mood changers.

The adverse effects of levadopa on liver, kidney, bone marrow, lung, and heart have been amazingly few. Elevation of BUN to the range of 25 to 30 mg% is common without any other evidence of renal disease. Transient elevation of SGOT to 50% above normal is also common without any other evidence of hepatic toxicity. To my knowledge, nothing more serious than this has been reported with the drug. Early there were reports of reduction in platelets, but I have seen nothing about this in the last 12 months and know of no life-threatening illnesses due to the effect of this drug on parenchymatous organs. There are many non-lethal side effects which I will comment on a little later.

Amantadine

I must say a few things about amantadine (Symmetrel). A serendipitous observation by a patient in Boston resulted in a large clinical trial of this drug with the results reported in the *JAMA* two years ago.[5] Although not approved by the FDA for use in treating Parkinson's disease, this drug is approved for use in older people for the prevention of Asian flu. The safety has been fairly well established, at least in doses of 200 to 400 mg per day. As far as I can tell, each physician must decide for himself the possible risks and possible benefits of prescribing a drug for conditions other than those approved by the FDA.[6] Some authorities feel that the combination of 1-DOPA and amantadine is useful. I personally doubt it, but am trying it anyway. I continue the largest tolerated dose of 1-DOPA and add amantadine 100 mg twice or three times a day, stopping after six weeks if there is no obvious benefit.

Mood Changers

Anxiety, depression, and insomnia are common in people with Parkinson's disease. The tendency is to prescribe a sedative or tranquilizer. Very often the sedative aggravates the depression and the tranquilizer aggravates both depression and the neurological symptoms of Parkinson's syndrome. Thorazine is often prescribed for the hallucinations which are commonly present in people taking 1-DOPA. This is self-defeating. In general, I think people with Parkinson's syndrome should not be taking sedatives or tranquilizers. The tricyclic antidepressants such as Elavil and Tofranil do not adversely affect the symptoms of Parkinson's disease. They sometimes are a great help in relieving the signs and symptoms of depression, such as insomnia, worry, and disabling fixation on symptoms such as burning, itching, and joint stiffness.

Polypharmacy

I think any person taking more than two or three drugs is in definite jeopardy, not only of lightening his purse but of confusing his enzymes. Although I have said that I continue the patient's Artane and Benadryl when I start 1-DOPA, I try to get rid of at least one of these in the next six months and usually stop both before adding amantadine or an antidepressant.

Counseling

Counseling with patients, relatives, and nursing home personnel is a very important aspect of treatment of people with Parkinson's syndrome. Delayed and slow improvement are easier to tolerate if expected. Physical therapy is good both for morale, for the problems of joint and skin accompanying immobility, and probably for general body health as well. I think it is very important to advise both the patient and those around him about the common side effects that will likely develop. This is particularly true with the hallucinations and involuntary movements which are often interpreted as evidence of insanity. They can be accepted calmly if they have been expected.

Side Effects

The major side effects of 1-DOPA are nausea, general malaise, torsion dystonia, and symptoms of hypotension. The nausea is a biochemical effect and not due to gastric irritation. The reduction of nausea by taking the medicine with food is probably simply a matter of reducing the rate of absorption. This is quite acceptable and the easiest thing to do. An alternative which many intelligent persons will find out for themselves is that frequent smaller doses are more easily tolerated. A patient on 2,000 mg per day is likely to prefer eight doses of 250 mg to four doses of 500 mg. Even in a nursing home where passing out medicine eight to twelve times a day is administratively difficult, it may be possible to have the nurse give the patient the total daily amount in a little pill box and let him take his own as he would peppermint lozenges.

Hallucinations are common, particularly in older people, caused by either antichloinergic drugs such as Artane, or by 1-DOPA. Reduction of the antichloinergic, reduction of the 1-DOPA dose, or the administration of pyridoxine (vitamin B-6) sometimes reduces the hallucination problem without reaching the benefits of the medicine.

Dystonia and Vitamin B-6

Torsion dystonia or choreic involuntary movements are extremely common with 1-DOPA therapy. These occur in somewhere between 50 and 90% of patients, depending upon how closely you look. They do not usually come on until after several months of therapy, and I have seen them come in the second or third six months of continuous level dose therapy. Restless tongue, slight grimacing or chewing movements, "drawing" of the toes or twisting of a shoulder is usually an embarrassment or an inconvenience which the person is quite willing to tolerate. Occasionally very dramatic and distressing involuntary movements are seen, sometimes coming on quite suddenly. Often agitation and hallucinations accompany this problem. I have found, and other authorities have confirmed, that intravenous administration of pyridoxine in doses of 10 to 50 mg will usually reverse this problem in a few minutes to a few hours. I then reduce the dose of 1-DOPA by 10 to 25%, that is from 4,000 mg per day to 3,500 mg per day or from 2,000 mg to 1,500 mg per day. If this solves the problem, but reduces the therapeutic effect of 1-DOPA, I go back up to the previous dose and add a small amount of vitamin B-6, somewhere between 25 mg per day and 25 mg per week. I have a number of patients who take a 25 mg tablet of pyridoxine every few days as they recognize the return of the involuntary movements. The same regimen is useful in managing the hallucinations.

Hypotension

Most people with Parkinson's syndrome have low blood pressure; 1-DOPA probably acts as a false transmitter much in the fashion of alpha methyl DOPA (Aldomet). Orthostatic hypotension is sometimes prominent and dizziness or lightheaded feeling and occasionally syncopy may result. For most patients, I find two things are adequate. First, explain the mechanism of this problem and encourage the person not to stand up quickly, but rather to prepare for standing up. For this, I suggest anticipating the move by 30 seconds, gripping the chair tightly or making a tight fist and getting angry at something. The other is to increase the salt intake. Some authorities have recommended the use of a mineral corticoid such as Florinef when hypotension is severe.

As with any long-term medication, I feel I ought to check for toxic effects on liver, kidney, and bone marrow. We were much more detailed on this two years ago, but now I check BUN, SGOT, and white blood cell count twice in the first three months and about every six months thereafter.

Diagnosis

The introduction of a new medicine for an old condition is always exciting. Widespread use of 1-DOPA in the treatment of Parkinson syndrome has raised a number of questions and created several problems. One of these is re-evaluation of the disease in question.

There are those who quibble about distinctions between "Parkinsonism," "Parkinson's syndrome," and "Parkinson's disease." This brings to mind the couplet: "Strange all this difference should be/ twixt tweedle-dum and

tweedle-dee."[6] I do not recognize any difference between "Parkinson's disease" and "Parkinson's syndrome." I personally prefer the suffix "ism" for political philosophy and not for disease. However, there are some diagnostic features which are very relevant to the use of 1-DOPA in treating patients with Parkinson's syndrome.

The four major features of Parkinson's syndrome, slowness-of-movement (bradykinesia), posture problems, rigidity, and tremor, cause disability in that order of importance. Consider the man of 45 who has a 5—6/sec. rhythmic tremor but does not have slowness of movement or rigidity. His condition is probably distinguished both by a positive family history, a notable lack of disability, a lack of progression. His condition is best described as familial tremor. He will have complete lack of response and notable lack of side effects with levodopa therapy. Envision the little old lady whose movements are quick and agile, but who has a low amplitude 5—8/sec. tremor without increase in muscle tone. Whether you diagnose her condition as senile tremor or arteriosclerotic Parkinson's syndrome, she is very unlikely to be improved by levodopa. Bradykinesia, stiffness, or tremor confined to one side of the body should make the physician suspicious of the possibility of a mass lesion in the opposite hemisphere. Further neurological studies should be done.

Two other important diagnostic stiuations are the person of middle age with depression or the older person who thinks he is slowing up just because he is getting old. Arteriosclerosis, Parkinson's syndrome, and failing memory often occur together but are not inevitable and unchangeable. The person and his relatives will rejoice and his memory may seem to improve if you treat the Parkinson's symptoms. Bradykinesia, often the first symptom of Parkinson's syndrome, does cause reduction of activity and reactive depression. Patients with "minor" symptoms and minimal signs are very grateful for the relief you can give them by early diagnosis and specific treatment. Avoid "tranquilizers."

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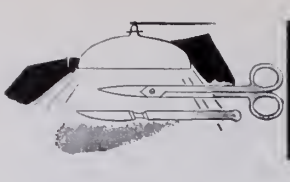
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GRAND ROUNDS



The University of Louisville School of Medicine

The following presentation represents the second in a new series, to be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

Postoperative Wound Infection

POSTOPERATIVE wound infection is one of the great unsolved problems in surgery, it being one of the most important causes of increased morbidity and mortality in surgical patients. Every operative wound treated by the surgeon is contaminated with bacteria to a greater or lesser degree and wounds become infected when balance between factors which favor infection and factors which prevent infection is triggered in favor of the contaminating organism. Multiplication of the organism leads to excitation of a local reaction and frequently a systemic response which ranges from leukocytosis and moderate fever to septicemia and even death. Infection frequently denotes an error in surgical judgement or technique.

It is the purpose of this discussion to describe two representative patients who acquired operative wound infections and to consider in the light of acceptable clinical and laboratory studies the responsible factors.

The principal clinical data resource is the National Academy of Science—National Research Council cooperative study of postoperative wound infection.[1] The study was undertaken to assess whether ultraviolet lighting of the operating suite reduced the overall incidence of surgical wound infection. Although the specific results were in the negative, the report is an unparalleled resource of careful data referable to modern surgical wound sepsis.

Case Reports

The following two cases are representative of postoperative wound infections.

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Case 1: O. C. is a 44-year-old negro male admitted on Nov. 5, 1971, with ten months history of lump, right thigh. Few days prior to admission he had started having pain in the lump. There is no history of injury.

On examination, the lump was 5 x 3 cm. in posterior lateral aspect of the right thigh. It was tender; x-ray of the right thigh had shown increased soft tissue density without the involvement of femur. On Nov. 11, 1971, the patient underwent excision of the lump which turned out to be synovial sarcoma. Patient had been given 1 gm of Keflin intramuscularly on Nov. 10, 1971, at night and 1 gm of Keflin on Nov. 11, 1971, in the morning. Postoperatively he was started on tetracycline on Nov. 13, 1971, for symptoms of upper respiratory infection. On Nov. 20, 1971, patient spiked a temperature of 102° F. and he had pain and swelling along the incision. He had leukocytosis. The wound was opened and pus was drained. The pus did not grow anything on culture. The wound was treated with saline dressings. It healed within a few days.

Comment: The clinical manifestations of the wound infection were modified because of tetracycline. The wound healed after adequate drainage of pus.

Case 21: D. N. is a 39-year-old obese negro female admitted on Aug. 31, 1971, with acute cholecystitis. She was treated with Ampicillin and intravenous fluids and after her acute illness was over, she underwent cholecystectomy with tube drainage of the common bile duct on Sept. 10, 1971. The gallbladder was perforated and there was an abscess around it. On Sept. 13, 1971, there was purulent discharge seen coming out of the wound. The patient had a fever and leukocytosis. The wound was opened and pus was drained. Culture from

the wound grew *Staphylococcus aureus* and *Klebsiella aerobacter*. The wound was treated with saline dressings and it healed within a few days.

Comment: This case represents a contaminated wound in an obese patient. She naturally ran a high risk of wound infection.

Classification

In order to appreciate the risks of wound infection, a classification of operations according to usual degree of contamination is useful. Surgical wounds and operations may be classified into three general groups:

(*i*) *Clean operation* is one in which skin incision is made through ideally prepared skin and which does not involve the opening of any organ containing bacteria. Inguinal herniorrhaphy is an example and craniotomy is representative of the ultra or "refined" clean operation. The incidence of wound infection in this type of wound is 3.3%.[1]

(*ii*) *Potentially contaminated operations* are those in which operation is carried out through properly prepared skin, but during which viscera are opened and, therefore, serve as a potential source of bacterial contamination. Examples are operations upon the gastrointestinal, genitourinary or lower respiratory tract. The incidence of wound infection in this group is 10.8%[1] or often higher in many series.

(*iii*) *Contaminated wounds* are the ones in which the operations are carried out through a field already contaminated by bacteria. Examples are fresh traumatic wounds and perforative appendicitis. The incidence of wound infection in this group is 16.3%.[1]

Cause

The common pathogens responsible for postoperative wound infection are *Staphylococcus aureus* (coagulase positive), *E. coli*, Pseudomonas, Proteus, Klebsiella and streptococci. In the NAS-NRC study, *Staphylococcus aureus* was responsible for 31% of infections, *E. coli* 22% and Proteus and Pseudomonas for 13% each.[1]

The figures for the last seven months of 1971 at the Louisville General Hospital show that *E. coli* has become the chief culprit in postoperative wound infection. There were 147 wound infections out of which *E. coli* was responsible for 26, Klebsiella for 23, Pseudomonas for 21, Proteus for 20, *Staphylococcus aureus* for 18 and Candida species for two. It is interesting that the four most common surgical wound pathogens were gram negative ones and accounted for 61% of all wound infections. The evolution of the principal pathogen from the streptococcus of the 1920's and 1930's and penicillin resistant staphylococcus of the 1950's is a pattern that is the legitimate product of a multitude of factors, not the least of which is the injudicious use of antibiotics. This changing pattern has perhaps been even more dramatic in burn wound sepsis where fungal and viral infections represent an ever increasing current problem.[2]

The object lesson is the adaptability of the microbial commensals and the implied enhanced susceptibility of some patients.

Factors which favor the establishment of wound infection are:

(*i*) *Pathogenicity and virulence of the organism.* As an example, streptococcus remains both in animal experiments and man a more competent threat, per se, then any of our dreaded present pathogens. The persistence of gram negative hospital infection is all the more indicative of impaired host defenses when one recalls that the coliforms are relatively sluggish challengers in most experimental settings.

(*ii*) *Quantity of the inoculum* obviously bears clinical documentation in both the urinary tract and surface burns and is well verified in experimental animal wounds.

(*iii*) *Vascular supply and specific anatomic sites* are often related. Wounds of the face are least likely to become infected, whereas lower extremity wounds frequently become infected.

(*iv*) The patient's general state of health and general immunity.

(*v*) *Treatments in progress,* particularly at the moment of bacterial contamination or challenge.

Factors influencing the incidence of postoperative wound infection are:

(*i*) *Classification.* The incidence is low for clean wounds, higher for potentially contaminated wounds and much higher for the contaminated wounds.

(*ii*) *Age of the patient.* The rate of wound

infections rises steadily from 4.7% in the 15-24 age group to 10.1% in the 65-74 age bracket.

(*iii*) There is no difference according to sex or race. The infection rate for males is 10.3% and 9.3% for females. It is 7.1% for whites and 8.6% for non-whites.

(*iv*) Some of the factors relating to the metabolic or nutritional status of the patient such as diabetes, obesity, malnutrition and steroid therapy influence the incidence of wound infection.

Animal experiments have indicated that:

(a) Wound healing is impaired in uncontrolled diabetes.

(b) Diabetic acidosis delays the early granulocytic phase of local cellular response to inflammation and acidosis of any cause is detrimental to host resistance in septicemia. The incidence of postoperative wound infection in diabetics is 10.4% as compared to 7.4% in overall control groups.

There is an 18.6% incidence of wound infection in the grossly obese patient. Blood volume and blood flow per unit weight are lower in adipose tissue than in lean tissue. The relative avascularity of adipose tissue is a likely explanation for the apparent susceptibility of obese persons to infection.

The incidence of wound infection in the malnourished is 22%. This may be due to protein depletion, which has been alleged to be associated with a poor antibody response.

Steroids depress antibody formation, alter vascular reaction to local irritants, diminish phagocytic capacity of polymorphonuclear neutrophils and suppress new capillary formation and fibrogenesis. The incidence of infection in patients being treated chemically with steroids is 16%.

(*v*) *Remote infection.* There is a striking increase in the postoperative wound infection rate in patients with remote infection—18.4%. This may be explained by a higher degree of susceptibility of a patient owing to low general host resistance as manifested by his acquiring first infection and by autogenous contamination of wound site.

(*vi*) *Drains.* There is a higher infection rate for drained wounds—11.1%—than for non-drained wounds—5%. Recent reports suggest that drains are inevitably "two-way streets," but a portion of this difference is no doubt due to the nature of the indications for drainage.

(*vii*) *Closure of the wound.* The infection rate for primary closure is 7%, for secondary closure, 28%, and for incomplete closure, 15%. The infection rate for skin grafts is 17%. These data are more reflective of the type of wound so treated than a condemnation of the method. Surely, delayed primary closure is a superb technic for decreasing wound infection in the contaminated patient.[3]

(*viii*) *Duration of the operation.* The incidence of infection rises steadily from 3% for procedures lasting less than 30 minutes to 18% for those lasting six or more hours. This may be explained by several factors:

(a) The total bacterial contaminations increase with time, both by exogenous as well as endogenous spread.

(b) The combined effects of exposure of the wound to air, trauma from prolonged retraction and manipulation and presumably increased amounts of suture material left at the operative site result in a local wound condition that is more favorable for infection as the duration of the operation increases.

(c) In prolonged procedures the systemic insult to the patient through blood loss or otherwise is likely to be greater.

(*ix*) *Preoperative hospitalization* may directly affect the susceptibility to infection, either by lowering host resistance or by providing increased opportunity for bacterial contamination. Patients hospitalized for less than two days preoperatively had infection rates of 6% as compared to 14% for those hospitalized for three or more weeks.

Sources of bacterial contamination may be both exogenous and endogenous. The bacteria causing postoperative wound infection are in most instances from the patient himself, either from the surface of his skin or as a contaminate from his internal organs. The remarkable similarity between the phage patterns of staphylococcus recovered from patients coming into the hospital and the bacteria obtained from postoperative infection of clean wounds verifies that the patient himself is the most likely source of bacteria found in clean wound infections. Similarly, bacteria found within the patient's hollow viscera violated by

operations of the "potentially contaminated" type are very similar to the organism found within the wound of these patients when an infection occurs.

A major exogenous source of contamination is the skin of the surgeon, particularly as it comes in contact with the wound through the frequently torn or punctured glove or through the transfer of bacteria across the clothing of the surgical team. Between 20% to 40% of all gloves are punctured during the course of an average operation. Whenever skin comes into contact with blood or serum, as is frequently the case after puncture of a glove, there is a rapid increase in the number of bacteria shed into the wound. A persistent skin carrier of *Staphylococcus aureus* will shed as many as 4,000 to 18,000 organisms into a wound through a single needle hole over a 20-minute period. Other exogenous sources of bacteria are instruments and the noses and throats of the surgical team.

Clinical Manifestations

In a typical situation the classical features of wound infection such as redness, pain, heat, and edema of the wound are seen. The systemic manifestations like low grade fever, chills, tachycardia, malaise, and leukocytosis are usually present. In the patient who is receiving antibacterial therapy, some of these features may be absent or modified. The onset with gram positive infection is typically early (3-4 days after operation) whereas with gram negative sepsis the appearance is often not until the sixth or eighth day, although a massive inoculum may produce apparent signs sooner.

Treatment

Treatment can be divided into definitive and prophylactic.

Definitive treatment consists of timely and adequate drainage. The sutures should be removed. The pus should be evacuated and cultured and the wound should be irrigated with saline solution and loosely packed and dressed three or four times daily. Antibiotics of an appropriate spectrum should be administered when systemic signs are prominent or when local tissue destruction appears to progress despite drainage.

Prophylactic treatment is properly directed towards the surgical technique. There should be exact hemostasis, gentle handling of tissues, careful layer to layer approximation without tension, avoidance of dead space, and use of fine suture material when the operative procedures necessitate the opening of a contaminated area. Strict local isolation should be accomplished by the use of additional drapes. A completely separate set of instruments should be used to close the wound after the contaminated drapes, instruments, gowns, and gloves have been discarded by the entire surgical team.

As far as the operating room is concerned, there should be increased rates of air circulation to above 20 air changes per hour through a filtering device. Relative humidity should be between 50 and 55%. Human occupants of the room should be reduced to a minimum of properly attired personnel and talking should be limited to a bare minimum.

Whenever possible, the skin should be shaved immediately pre-op instead of the previous night. This reduces the incidence of wound infections.

Prophylactic use of systemic antibiotics is highly recommended for potentially contaminated operations as it has been shown that it reduces the incidence of post-operative wound infection. The antibiotics should be given in sufficient dosage so that there is an optimum effective serum level of it by the time skin incision is made.[4]

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RAMESH SHAH, M.B., B.S.
HIRAM C. POLK, JR., M.D.

SPECIAL ARTICLES

An Evolutionary Analysis of the Soul of the Medical Student†

H. Martin Blacker, M.D.*

GOVERNOR Chandler, Vice-President Willard, Dean Jordan, Good Associate Deans, Department Chairmen, Visiting Medical Society Dignitaries, Graduating Class President, Carl Friedman, Graduating Class, families and friends.

If I have made any omissions from that list, or if I have breached the proper order, it is because my temporal lobe is incapable of storing a longer series. Please remember that I meant well.

When Carl Friedman came to my office to inform me of my selection as commencement speaker, I am sure he would testify to the fact that I was overwhelmed. I consider it a high honor to have been selected by the same group of students who have been forced to listen to me lecture for the past few years in the classrooms, on the wards and clinics, and in the operating room. At that time, they had no choice but to listen. The fact that they have chosen of their own volition to listen to me now is either testimony to the fact that they take a perverse joy in punishing themselves or because they actually value what I might have to say. For purposes of preserving my own ego strength, I choose to believe the latter.

I am told by my spies that after the selection had been made, one student was heard to remark, "What is he going to do without slides?" It took only five days for a private investigator to find out who the fellow was. I don't want you to feel that I harbor any ill feeling toward that student, but one of you will receive a diploma today written in disappearing ink.

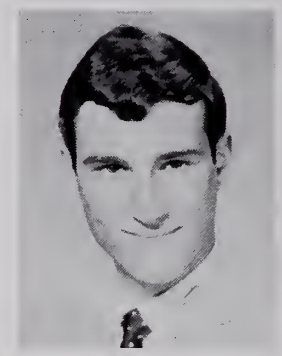


FIGURE 1



FIGURE 2

This is tragic, because I am certain you are all aware of the College of Medicine By-laws, section 5, paragraph 9, which states that any student who crosses this stage without a valid, permanently inscribed diploma clutched in his hand will be required to repeat the entire four years of medical school in order to again have a chance for the M.D. Degree.

I want to explore these four years of medical school with you. To do so and particularly to underscore the fact that the faculty will not be intimidated, I *am* going to use slides and render one last lecture.

Look with me into the face of innocence (Figure 1). This is Carl Friedman when he entered medical school. He is class president and an outstanding student—certainly a worthy representative to illustrate the points that I want to make today. The face is unlined, the expression is naive, ingenuous, radiating an eagerness to be transformed into today's physician.

This (Figure 2) is Carl Friedman today. Look at the changes. Behind that foliage there lurks a man whose naivete has been turned to ashes in the crucible of medical school. It has been a stressful and maturing period. These external changes are obvious, but what about those which have evolved internally? What is

†*1970 Commencement address, University of Kentucky College of Medicine*

**Assistant Professor of Neurosurgery, University of Kentucky, Lexington, Kentucky*

the anatomy of a medical student's soul? How does it change over a four-year period, and what has it become at graduation?

By a secret process which I have developed in the laboratory known as "soulanalytic neurosurgery," which I have in all modesty brought to the attention of the Nobel Prize Committee, I intend to reveal this process of soul evolution.

Before doing so, I must conduct for your proud parents, wives, and sweethearts, a three-minute course in normal brain function. Now parents, you must listen carefully, because we have prepared a multiple choice exam which you must pass in order to be permitted to leave Memorial Hall.

In the last century, the concept of localization of function within the brain developed. Localization of function in this context means that there are certain parts of the brain concerned with certain tasks.

For example (Figure 3), if a certain area of the brain is destroyed—say by an injury or by a stroke—the ability to speak will be impaired in most patients.

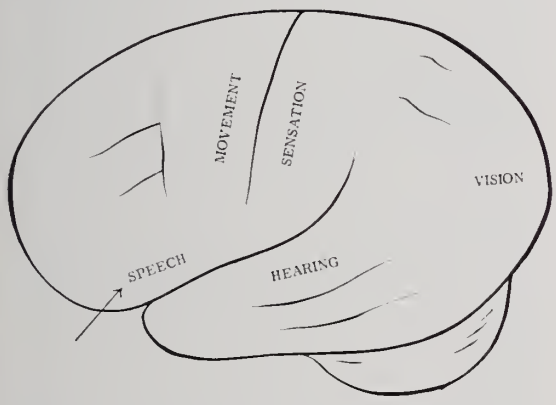


FIGURE 3. Localization of function within the brain.

Another concept germane to our discussion today is the fact that various areas of the brain interact and influence one another to produce a given act.

So it is with the soul of a medical student whose anatomy we are about to explore. There are complex psychic processes—rage, passion, idealism, antipathy—which are accentuated or inhibited depending on the type of soul equipment he has developed in response to the task of becoming a physician.

This is another laity-orienting view (Figure 4) to indicate the ways in which we're going to depict soul anatomy. If you were curious about the internal composition of the brain,

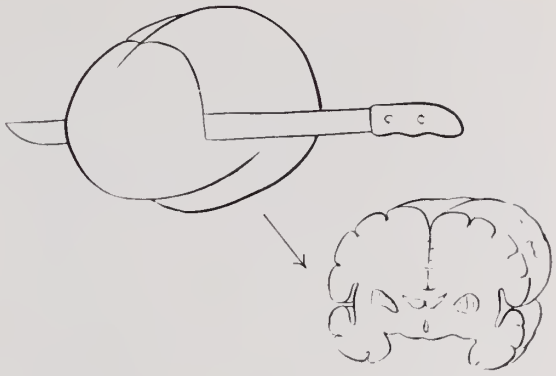


FIGURE 4. Technique of depicting brain (soul) anatomy.

you could slice it like this. Similarly we are going to be looking at the medical student's soul from side views as well as a section like this.

Here is the soul of the medical student (Figure 5) as it evolves over the first two years. He is faced with an overview of gross anatomy, cell biology, histology, biochemistry, microbiology, embryology, and anatomy of the nervous system. Periodically he gets a glimpse of a clinical case which tells him what he is learning is really important.

The volume of work is mountainous. Consequently, the fear of failure (disappointing you, their parents, wives and family) looms large. This "Fear Center" which seems to poison many of his responses, supports the evolution of a "Paranoia Center" which foments the idea that people and events are conspiring against him. Modern students—especially those at the University of Kentucky—

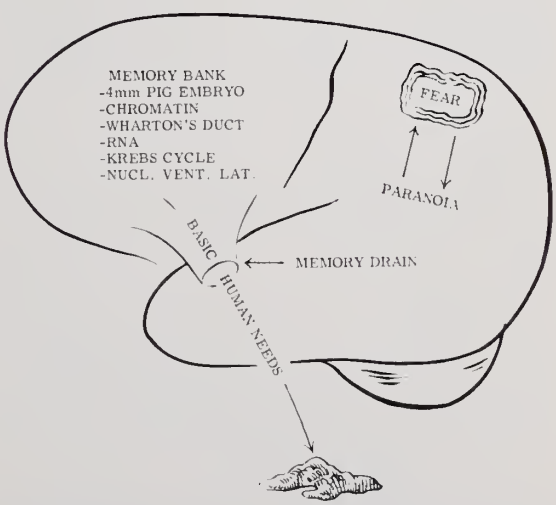


FIGURE 5. Soul of medical student as it evolves over the first two years of medical school.

are particularly fortunate because their professors have a degree of kindness and understanding found nowhere else in the country.

When I was a first year student, one of the major objectives was to remain unnoticed, particularly by the anatomy professor, Doctor X. He was an individual who delighted in terrorizing the students—or so we thought (actually beneath his gruff exterior he had a heart of stone). I have told some of the students of the time when one of my classmates with a gift for mimicry was imitating this learned man. Doctor X had a midwestern nasal twang worse than mine, and used to hold forth in the following way, "We're going to talk about the GI tract in general and the pancreas in particular." Our student mimic in the dissecting room twanged, "We're going to talk about the cranial nerves in general, and the trigeminal in particular . . ." At this juncture, Dr. X came up behind him, and having listened for awhile interrupted to say, "I don't know whether that's your natural voice or not, but you had better talk that way for the next four years."

Because these bodies of knowledge are so complex and because of the difficulty anchoring seemingly isolated facts and principles in memory, one can see the reason for a memory drain. A medieval story illustrates this dilemma. Once a stranger walking along a path met three men plying their trade of stonecutting. He asked the first, "What are you doing?"; to which the man replied, "I am cutting stone." He asked the second man, who answered, "I am making a cornerstone." He asked the third man, who replied with a faraway look in his eye, "I am building a cathedral." It is so difficult for the medical student fashioning a structure of knowledge out of the stones of facts and principles, to envision the idea that he is building the cathedral of a physician. Often the faculty's inability to make him realize this, results in deep frustration for both the students and the professors.

For the most part, the "Fear-Paranoia Complex" supports and drives the "Work Capacity Center" at a frantic rate. The medical student, understandably seeking respite from this pace, is also influenced by his desire for sleep and by the area which for lack of a better name we are going to call the "Messin' Around Center." Occasionally, a sad imbalance develops

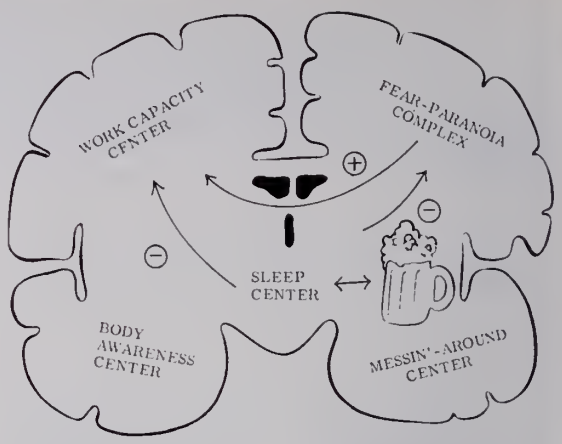


FIGURE 6. Cross sectional view of medical student's soul in first two years of medical school.

between these two complexes and the "Sleep-Messin' Around" axis totally suppresses the "Fear-Paranoia and Work" complex. When this occurs beyond a certain point, the student is invited to try his luck at a profession or trade other than medicine. (Figure 6)

In the second part of the basic science years, the student having learned about the normal, is now introduced to the abnormal. In response, he develops a frightening awareness of his own body. Sophomore students, after the lecture on malignant melanoma, are usually found counting the birthmarks on their bodies and having those on the soles and hands, as well as in areas of irritation, removed by the first surgeon they can find.

The clinical years of school have produced the semi-finished products (Figure 7) of whom you and we, the faculty, are so proud. I say semi-finished because the process of being a physician is an ever-continuing one. Figure 7 depicts the anatomy of their souls as they have developed and will continue to develop. One compartment is all-important—an adequate knowledge of disease and its treatment. Because this has the capacity to undergo involution and shrinkage, it must be constantly refurbished and updated by frequent trips to the journals.

A valuable adjunct is the frequent recognition of the fact that the physician does not always "know." He may need help from his colleagues in other fields. There is no indignity in the utterance of the phrase, "I don't know," especially if it is coupled with the resolve to find out.

A "Sustained Effort Center" is mandatory soul equipment for the physician. After Lyndon

Johnson succeeded John Kennedy, Reston's column in the *New York Times* characterized Johnson's style by paraphrasing Kennedy's inaugural address to conform to Johnson's rules. "Ask not what you have done for President Johnson, ask what you have done for President Johnson LATELY." The implication, obviously, was that Johnson was insatiably demanding and that yesterday's service did not relieve one of today's obligations. So it is with Medicine, which is also relentless in its demands on the physician. Past performance, past triumphs, past fidelities mean little if your vigilance flags. In that moment of laxity, you may lose the battle for the patient. His disability or death is no less catastrophic because of what you did for the previous patient.

The "Temptation Quelling Center" has many parts, but I bring your attention to only three. First is the "Conclusion Jumping and Final Pronouncement Section." It is important to refuse to come to a conclusion until all the evidence is in. Suspended judgement is the heart of the process of scientific analysis. Be especially reluctant to make a final pronouncement of an incurable disease until all active efforts have been made to rule out a potentially curable one. If the diagnosis is in doubt, reevaluate the patient at suitable intervals. Your efforts are in his best interests.

Resist the temptation to argue with patients. You are the patient's guardian and protector—not his antagonist. Be patient with him. Be patient with his family. These people are concerned and frightened. Their ability to think rationally may be impaired under stress. Although the temptation may arise, don't tell him off. You are providing therapy for yourself at his expense.

Resist the temptation to be sarcastic in the chart. With your pen in hand, the cleverest lines of Gore Vidal and William Buckley—those two masters of derision—may come to mind when a patient's behavior doesn't please you. Your own witticism becomes more of a half-witticism if read back to you in a courtroom.

You will undoubtedly develop your own method of talking to patients and their families. It is my earnest recommendation that you try the simple truth. This was brought home to me early in my training. When I was an intern, I visualized myself as being the great comforter. I would be torn by the sight of a mother or other relative crying over the patient. In the interest of making her feel better, I would say something inane, "Don't worry, everything will be all right." When things did *not* turn out all right the family felt indignant and betrayed—and they were justified. Families will weigh everything you say very carefully. They set great store by your predictions. Let their confidence in what you say be justified by telling the truth. One can be honest without being brutal, compassionate without being maudlin, and yet retain the proper detachment without being callous.

One also finds the "Stability-tranquility Center" and "Sense of Humor" which collectively I have named the "Sanity Complex."

In medicine especially, one learns how fragile life is. Our hold on life is as tenuous as the diameter of a coronary or cerebral artery. With its fragility, we realize how precious life is. To our frustration, we cannot create nor give life. Our job is, as a mentor of mine has said, to modify the effects of disease on life and in so doing, to try to preserve it. Implicit is the recognition of our limitations. The virulence of an organism, the aggressiveness of a cancer, the inexorable degeneration of a vital system, may defeat our best efforts and take the patient from us. Sad as this is, one cannot become morose or disconsolate, lest this cripple our ability to help our other patients. This amounts to a striving for sanity. It is not always easy.

Let me define sanity by examining the obverse—insanity. One form of schizophrenia was beautifully described by Bleuler as a splitting off from reality, an inability on the part of

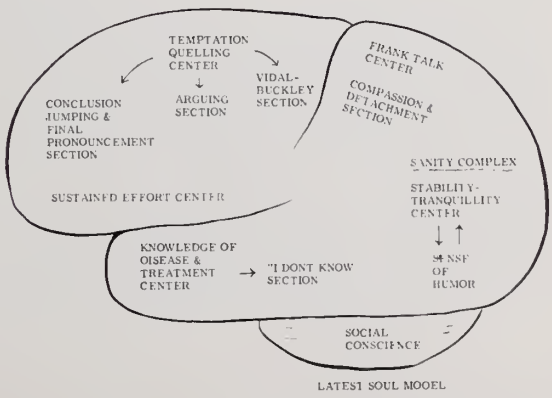


FIGURE 7. Medical student's soul—semi-finished product.

the patient to relate to events and people around him in their proper context.

Perhaps sanity may be defined as the *ability* to relate to that environment. Might our grip on sanity be strengthened by mooring ourselves to this real world in as many meaningful ways as possible? Central to this effort for most of us is the love of wife and children. But one should also explore other avenues such as reading literature, playing and listening to music, involvement in the community—all of which should balance with our life in medicine. A proper balance makes one a better physician and one likely to last longer.

On the latest model soul, there has emerged a social conscience. This is not to imply that it was not present on earlier models, but simply to underscore the fact that it is more in evidence. I don't believe this is a generation that promises much but is going to deliver little. I believe there is a qualitative difference between your motivation and ours. We applaud your efforts and look forward to your accomplishments.

In conclusion, I want to thank you for the experience of teaching you. In preparing these thoughts, I reviewed for myself why I am attracted to the teaching, as well as to the practice of clinical neurosurgery. The answer is that I am not selfless, but rather that I am self-seeking, an admission which I offer with no shame —because the process of teaching may be regarded as the opportunity to expand one's personality. You, our talented and hard-working students become, in part, extensions of us your teachers. You are our keys to immortality. All of us are hopefully seeking truth and excellence. As our students, you become partners, and finally our successors in this continuing quest.

Examine this quest with me for a moment: Lloyd Douglas, the novelist, visualized in a novel called *Green Light* the idea that all of mankind was part of a great parade. This parade was a grand march toward a universal morality. At certain major points along this parade, mankind was called upon to go up to a new plateau. This required a massive ascent. There were those in the parade who hadn't the courage nor moral stamina to go on and were left behind. Others actually impeded further ascent, while others were passively dragged up to the next level. A gifted few led and pulled the group up to the next plateau, after which the great parade continued.

Douglas was an optimist in that despite the laggards among the paraders, the total direction of the procession was forward and even upward. It takes no genius at observation of this parade to detect the fact that we're presently confronted with the challenge of another steep rise! This rise involves the rebirth of the concept of the dignity of man and all that this implies. Like those in Douglas' book, some of us are not going to be able to summon the courage to go up; others are going to try to keep their fellow marchers back; many are going to be dragged up; and still others are going to be the inspiring leaders of the ascent.

Perhaps you, from your vantage point as a physician, are going to be one of the leaders. If you fancy yourself as one of these, I have a caution. It has to do with recognizing the fact that the road you choose may not be the only one. Use that medical training which has taught you to evaluate things fairly and objectively to shape your conclusions. Maintain a healthy skepticism toward the ideas of others and toward your own. Entertain the idea that others may have valuable contributions.

My French-Canadian mentor, Dr. Claude Bertrand, used to invoke these words of Andre Gide, the French novelist, "Mon fils, recherche la compagnie de ceux qui cherche la verité, mais mefie tois de ceux qui l'ont trouvé." This means, "My son, seek the company of those who seek the truth, but beware of those who have found it."

EDITORIALS

Health Care? – Some Thoughts

FOR SOME time now I've been wrestling with the concept of "Health Care".

Ever since it became fashionable to describe the medical profession either as a Cottage Industry (or a tight monopoly), hopelessly fragmented (or rigidly organized)—anything, so long as it's derogatory—, I've been among those who have heard the message loud and clear—"Stop just treating disease; you doctors must keep us all healthy, or you're not really doing your job!"

Well, I listened and, despite the suspiciously political nature of most of the criticism, I accepted the basic premise that health *is* better than disease, and that our medical horizons, bred into us from medical school onward, may well be too narrow. Perhaps we should, I said to myself, if we want to preserve our positions as leaders of the "health care" team, accept the challenge and work toward the admittedly fine ideal of "Perfect Health for All." After all, who else knows more about Health than we do? And, since Perfect Health for All has undeniable clout, and therefore is undeniably going to be heavily promoted, shouldn't we lead, instead of being put in the position of being dragged, by our patients, into the brave new world of the 20th Century?

Well, I tried hard to absorb these ideas and ideals, like a lot of others of us have done, and in spite of what you have to believe was a sincere and honest effort to look at the situation from the patient's point of view, I found digestion hard to come by—indeed, a little heartburn set in.

I began to think—really think.

What our patients are being led to expect by the basically "news" oriented communications media, and by the promises of some political figures, I'm afraid, is a medical care system that keeps *everyone* healthy. Anything less than health for all is looked upon as a failure of the system. Webster's defines "health" as "the condition of being sound in body, mind, or soul; esp: freedom from physical disease or pain."

Think about that. We know there's no one alive now—*not one*—who will not get sick, perhaps several times, and eventually will *die*. There's no way—not with a National Health Care Act, not with a pile of money in a National Cancer Institute, not with a Health Planning Council—that such an outcome can be avoided; and every time it happens, if we buy the basically oversold premise of Perfect Health for All, we, as leaders of such a system, will be held responsible. In too many minds, "Medical Care is a Right" becomes "Health Care is a Right" which then becomes "Health is a Right"! Regrettably, it just can't be so—and no social or legislative convolutions will make it so. Health Care? Health doesn't really *need* care. We still need what we've got—*sick* care, only better.

So I've come to a belief I'd like to sell a little more widely (especially in Congress!)—one that will herein be known as "Hume's Doctrine of Reasonable Expectations". Simply stated, such a doctrine acknowledges that (1) we as physicians can help many ill people, but not all; (2) we can and should work to improve conditions for everyone, but we cannot do such a big job alone; and (3) we should warn of the dangers involved in any plans which set "Perfect Health" and "Immortality" as the standards against which we are judged. Reality, gentlemen, is a good word.

WALTER I. HUME, JR., M.D.

Letters To The Editor

The Letters To The Editor column is a means for the KMA physicians to express their opinions and viewpoints on varied topics. If you have an item you would like brought before your fellow practitioners, please submit it to Letters To The Editor, Kentucky Medical Association, 3532 Ephraim McDowell Dr., Louisville, Kentucky 40205. Communications should not exceed 250 words. The right to abstract or edit is reserved by the editors of *The Journal*. Names will be withheld upon request, but anonymous letters will not be accepted.

Dear Editor:

I have been reading with much interest and appreciation the progress that the Kentucky Medical Association is making in peer review and the plans for increasing the activity, which I think is vital.

Enclosed is a copy of a story that was in the February 7 AMA NEWS (story was entitled "MD held liable for 'unnecessary' hospital admission"; also see Insurance Page, page 262, the *KMA Journal* this month) pertaining to a court case holding doctors liable for admissions and lengths of stay on patients determined unnecessary by utilization review committees. Their decision supports the position of the Insurance Commissioner of Pennsylvania. It is doubtful that such a decision will stand, but if it does, there are very serious implications for doctors, patients, hospitals, and prepayment organizations as well as commercial insurance companies.

We are constantly trying to educate our members and urge that they not pressure doctors to admit them to a hospital for services that can be performed on an outpatient basis and to keep them longer than medically necessary. Members are not paying for such services in their dues.

All of our certificates of membership contain the following clause:

> "Blue Cross Hospital Plan, Inc., may at any time prior to, during, or subsequent to the hospitalization of a member require a certification from the attending physician that admission to the hospital, treatment rendered, and/or continued hospitalization is/was a medical necessity. Hospital charges incurred not so certified by the attending physician shall be borne by the patient. Blue Cross Hospital Plan shall further have the right to submit hospital cases to the Medical Review Board. Hospitalization in whole or in part not considered medically necessary by the Review Board shall be borne by the patient."

It seems to me imperative, for the protection of patients, doctors and hospitals, that all institutions must have effective utilization review programs and that the medical record of every patient should contain an entry as to the time the patient has been advised that he can be discharged; then, if a patient insists on staying and a bed is available, it will be at his own expense with no misunderstanding.

J. Ed McConnell, President
Kentucky Physicians Mutual, Inc.
Blue Cross Hospital Plan, Inc.
Louisville, Kentucky

Dear Editor:

I am editing a book on the role of faith or religion in healing from a physician's standpoint. Any physician interested in contributing to this book, please write to the following address.

Claude A. Frazier, M.D.
4-C Doctors Park
Asheville, N.C. 28801

Dear Editor:

In the February issue of *The Journal of the Kentucky Medical Association,* the references in our article, "Mallory-Weiss Syndrome and Massive Hematemesis" are not in their proper order. This was an error on our part and the revised references can be obtained by writing to our office.

R. S. Berardi, M.D.
Assistant Chief, Surgical Service
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Lexington, Kentucky 40507

ORGANIZATION SECTION

Four District Mtgs. Planned; Two Are Held Recently

Meetings of the Eighth, Second, Thirteenth, and Sixth Trustee Districts of KMA have been scheduled for April and May. The First and Tenth Districts recently held their sessions.

Carl J. Brueggemann, M.D., Covington, announced that the Eighth District will meet at the Carter Caves State Park in Olive Hill on April 15. John S. Harter, M.D., Louisville, KMA President, will be the featured speaker for this session. April 18 is the date set for the Second District meeting, according to Charles C. Kissinger, M.D., Owensboro. The meeting will be held at the Owensboro Country Club and will feature Henry B. Asman, M.D., Louisville, President of the Kentucky Foundation for Medical Care.

Scheduled for May 2, the meeting of the Thirteenth District will be held at the Belefonte Country Club in Ashland. J. Wesley Johnson, M.D., Ashland, will preside and Doctor Harter will also be on this District's program. Paul J. Parks, M.D., Bowling Green, announced a meeting of the Sixth District on May 9 at the Ramada Inn, Bowling Green. Doctor Asman and Marvin A. Bowers, Jr., M.D., Louisville, will discuss the Foundation and peer review.

A discussion and slide presentation on the Foundation by Doctor Asman highlighted the meetings of the First and Tenth Trustee Districts. W. Eugene Sloan, M.D., Paducah, presided over the meeting of the First District on February 23. The Tenth District met on March 14 and David A. Hull, M.D., Lexington, presided.

Kentucky Represented By 14 At Annual AMPAC Mtg.

Fourteen KEMPAC representatives attended the AMA/AMPAC Public Affairs Workshop held March 11 and 12 in Washington, D. C. Several Congressional speakers along with medical and legislative experts addressed the Workshop participants on a few of the AMPAC projects for 1972.

U. S. Congressmen William R. Roy (D-Kan.), Robert B. Mathias (R-Calif.), Joel T. Broyhill (R-Va.) and Senator Clifford P. Hansen (R-Wyo.) dealt with such subjects as National Health Insurance and candidate support committees. Direct mail solicitation for PAC membership was also a strong topic of discussion.

An AMPAC Leadership Conference, held the day before the Workshop, was attended by Fred C. Rainey, M.D., Elizabethtown, Chairman of the KEMPAC Board; Dallas C. Hagg, M.D., Frankfort, KEMPAC Board member, and Mr. Gilbert L. Armstrong, Consultant to KEMPAC and KMA Director of Field Services.

Hoyt D. Gardner, M.D., Louisville, presided over the seminar as Chairman of the AMPAC Board of Directors. Other KEMPAC members in attendance at the meeting were John S. Harter, M.D., Louisville, KMA President, and Mrs. Harter; David B. Stevens, M.D., Lexington and Mrs. Stevens, KMA Woman's Auxiliary President; Carl Cooper, M.D., Bedford; Mrs. Hoyt D. Gardner, Louisville, Vice-Chairman of the KEMPAC Board; Mrs. William Pearson, Owensboro; Mrs. George Schafer, Louisville; Mrs. Dallas C. Hagg, Frankfort, and Mrs. James R. Barnes, Louisville.

U of K Medical School Selects Family Practice Dept. Head

James A. Burdette, M.D., has been named as the first Chairman of the new Department of Family Practice at the University of Kentucky College of Medicine.

A former research fellow in family medicine at the Harvard Medical School, Doctor Burdette will assume chairmanship of the UK family practice program, named the William R. Willard Department, this month.

Doctor Burdette has served as deputy chief of the Department of General Practice at the University of Tennessee Memorial Research Hospital and is a former president of the Tennessee Valley Academy of General Practice.

The Family Practice Department at the University of Louisville School of Medicine is headed by William P. VonderHaar, M.D.

KMA INTERIM MEETING

Since the 1972 KMA Interim Meeting took place shortly after press time, it was not possible to include a follow-up story on the meeting in this issue of *The Journal*. Complete coverage will appear in the May issue.

Ky. Bar Convention To Feature Medical Litigation Symposium

The Kentucky Bar Association will hold its 1972 annual convention May 24-26 at the Executive Inn in Louisville.

This year's meeting will be of special interest to physicians as a Medical Malpractice Litigation Symposium will be presented on the Thursday program. Details of this portion of the KBA Convention follow.

Thursday, May 25, 1972

8:30 a.m. Registration

9:00 a.m. Opening General Assembly

9:30 a.m. **Medical Malpractice Litigation Symposium**

Introduction—E. Gaines Davis, Jr., KMA Legal Counsel

Nature and Scope of Medical Malpractice Litigation in the U.S.—Richard P. Bergen, Director, AMA Legal Research Department

Is There a "Conspiracy of Silence" and is "Res Ipsa Loquitur" a Proper Substitute for Expert Testimony?
Murray Sams, Miami
John Shepherd, St. Louis

12:15 p.m. Luncheon—Robert W. Meserve, President-Elect, American Bar Association

1:30 p.m. **Medical Malpractice Litigation Symposium**

Can the Medical Malpractice Docket be Satisfactorily Reduced?
The New Mexico Plan—Howard Houk, Albuquerque
The Oregon Plan—Kenneth Renner, Portland

Are Interprofessional Codes Worthwhile?
What Doctors Dislike Most About Lawyers—Thomas M. Marshall, M.D., Louisville
What Lawyers Dislike Most About Doctors—Herbert D. Sledd, Lexington
How Much Friction Could Be Eliminated by Adoption of an Interprofessional Code?—Edwin Holman, Secretary, AMA Judicial Council

PANMED To Conclude Season With Survey To Physicians

Cooperation among the various health fields in coordination of the PANMED series on the Kentucky Educational Television network has been a pleasant reality for the 1971-72 season, according to R. K. Brown, M.D., Georgetown, Chairman of the KMA Educational Television Committee.

The PANMED programs in medicine which are coordinated by the KMA Committee will conclude the spring season with five programs on May 10, 17, 24, 31, and June 7. The programs will deal with lung cancer, the intensive care unit, and hypertension, and each will be followed by a panel discussion.

Immediately after the June 7 program, physicians in Kentucky will be able to telephone questions to a panel and have them discussed "on the air."

It is the hope of the KMA ETV Committee that Kentucky physicians will avail themselves of this mode of continuing education. To learn the attitude of physicians concerning these programs, a survey card will be sent to each KMA member to be completed and returned to the KMA Headquarters Office.

Alcoholism To Be Main Focus Of Community Health Week

Community Health Week in Kentucky will be observed May 1-7, 1972, according to John M. Baird, M.D., Danville, Chairman of the KMA Committee on Community and Rural Health. The committee has completed its plans for this annual observance which includes a request for an official proclamation by Governor Wendell Ford.

Other state organizations will be asked to join KMA in urging all Kentuckians to become aware of the many implications of alcoholism, which is the most abused drug in the United States today.

Doctor Baird urges all KMA members and allied groups to take an active part in Community Health Week by displaying special posters which draw attention to the various aspects of alcoholism.

"Alcoholism," he noted, "has been designated as a treatable disease and part of the purpose of this promotional effort by KMA is to inform the membership of the many facilities and treatment possibilities that now exist." He stressed that treatment of the alcoholic requires understanding on the part of the family as well as the patient and urged that all citizens of the Commonwealth become familiar with this far-reaching problem.

Emergency Care Symposium To Meet in Houston

The First National Symposium on Community Emergency Medical Services will be held at the Astroworld Hotel, Houston, Texas, on May 26-27. Co-sponsored by the American Medical Association and the Harris County Medical Society, the Symposium will focus on how a community can develop a comprehensive emergency medical program.

Participants in the meeting will also review the roles of local, state and national organizations and assess the resources available to accomplish the goals. For more information, write Robert L. Donald, M.D., Harris County Medical Society, 400 Jesse H. Jones Library Building, Houston, Texas 77205.

Pike County Society Reaches Goal Of 100% KEMPAC Membership

The Pike County Medical Society recently reached a goal set at a Society meeting last year to have 100% membership in KEMPAC, according to Fred C. Rainey, M. D., Elizabethtown, Chairman of the KEMPAC Board of Directors.

With the dues for 31 family memberships having been received at the KEMPAC office, Pike County is noted as being the first county society this year to receive total KEMPAC support from its members.

This year KEMPAC will focus attention on the important national races and help candidate support committees in Kentucky elect seven U. S. Congressmen and one U. S. Senator.

Although KEMPAC will not participate in the Presidential election, a family membership in KEMPAC entitles a physician and his wife to belong to the American Medical Political Action Committee and thus to broaden AMPAC's activities on a national scale.

KHA To Hold 43rd Annual Mtg. April 17-19 in Louisville

"Transition, What Next?" will be this year's theme for the 43rd Annual Convention of the Kentucky Hospital Association. Scheduled for April 17-19, the meeting will be held at Louisville's Convention Center.

The Immediate Past President of the American Hospital Association, Mr. Jack L. Hahn, Indianapolis, will address the President's Luncheon, April 18, on the "National Health Picture."

Among the other outstanding speakers for the KHA General Sessions will be Joseph Hamburg, M.D., Dean of the School of Allied Professions, University of Kentucky. He will participate on a panel to discuss "The Nursing Service Administrator's Role in Coordination of Patient Care."

Guest Speakers, Timely Topics Are KAFP Mtg. Features

Kenneth M. Eblen, M.D., Henderson, President of the Kentucky Academy of Family Physicians, announced recently that the organization's 21st Annual Scientific Session will be held May 11-14 at Lake Barkley State Park in Cadiz.

Featured on the scientific program will be several prominent guest speakers from Kentucky and throughout the country. Ian M. Thompson, M.D., Professor of Urology at the University of Missouri School of Medicine, Columbia, will address the session on "Genitourinary Infections in Children."

Venereal disease, alcoholism, and the problems of marijuana are topics to be discussed at the Friday evening session by Walter H. Smartt, M.D., Manhattan Beach, Calif. and Robert Forney, Ph.D., Indianapolis.

Meetings of the Congress of Delegates of KAFP and the installation of officers will also be included during the annual meeting.

Sandford L. Weiler, M.D., Frankfort, Chairman of the 1972 Scientific Assembly, says the aim of this year's meeting is to give the physician "a weekend of relaxation along with learning."

Referral Patients Wanted By Cancer Institute

The cooperation of physicians is requested in the referral of patients with melanomas and sarcomas of soft tissue and bone for studies being conducted by the National Cancer Institute's Surgery Branch at the Clinical Center, National Institutes of Health, Bethesda, Maryland.

Needed are patients with primary tumors and those with limited metastases which are amenable to primary surgical treatment. Selected patients will be admitted to combined surgery, chemotherapy, and immunotherapy protocols.

Patients treated will receive adjuvant therapy according to criteria based on tumor anatomic location and histologic type. Immunologic studies will be performed preoperatively and at intervals postoperatively to monitor the effects of adjuvant therapy and provide sensitive means of follow-up for earlier detection of recurrent tumor.

Upon completion of their studies, patients will be returned to the care of the referring physician who will receive a summary of findings.

Physicians interested in having their patients considered for admission to these studies may write: Alfred S. Ketcham, M. D., Clinical Center, Room 10-N-116, National Institutes of Health, Bethesda, Maryland 20014, or telephone: 301-496-4164.

Louisville Physicians Granted ACP Membership

Angelo A. Ciliberti, M. D., Richard W. Dane, M. D., and John J. Martin, Jr., M. D., all of Louisville, were recently granted membership in the American College of Physicians. The 56-year old international medical specialty society dedicates itself to upgrading medical care, teaching, and research through stringent standards of membership and programs of continuing education.

Hugh R. Butt, M. D., Rochester, Minn., President of the College, said the new members are those doctors who graduated from medical school at least five years ago and who have limited their practice to internal medicine or a related specialty and have submitted evidence of their eligibility to take their specialty board examinations.

1972 Officers Listed for County Medical Societies

The KMA Membership Department has received the following lists of officers and delegates of county societies for 1972.

Boone
President: Floyd Poore, M.D., Florence
Vice-President: Harold Markesbery, M.D., Florence
Treasurer: James R. Schrand, M.D., Florence
Secretary: Joseph F. Daugherty, M.D., Florence
Delegate to KMA: William R. Yates, M.D., Hebron
Alternate Delegate: Glenn Baird, M.D., Florence

Breathitt
President: Robert E. Cornett, M.D., Jackson
Vice-President: Price Sewell, III, M.D., Jackson
Secretary-Treasurer: Farren C. Lewis, M.D., Jackson
Delegate to KMA: Farren C. Lewis, M.D., Jackson
Alternate Delegate: Robert E. Cornett, M.D., Jackson

Calloway
President: Hal E. Houston, M.D., Murray
President-Elect: Richard H. Stout, M.D., Murray
Secretary-Treasurer: Samuel G. Bell, M.D., Murray
Delegate to KMA: Donald G. Hughes, M.D., Murray

Carroll
President: Hugh C. Williams, M.D., Carrollton
Vice-President: E. S. Weaver, M.D., Carrollton
President-Elect: James D. Ford, M.D., Carrollton
Secretary-Treasurer: Hugh C. Williams, M.D., Carrollton
Delegate to KMA: E. S. Weaver, M.D., Carrollton
Alternate Delegate: James D. Ford, M.D., Carrollton

Franklin
President: W. H. Rush, M.D., Frankfort
Vice-President: E. S. Kimbel, M.D., Frankfort
Secretary-Treasurer: Edward Martin, M.D., Frankfort
Delegate to KMA: W. H. Keller, M.D., Frankfort
Alternate Delegate: J. Myron Lord, M.D., Frankfort

Grant
President: Darl B. Shipp, M.D., Dry Ridge
Vice-President: F. R. Scroggin, M.D., Dry Ridge
Secretary-Treasurer: Lenore P. Chipman, M.D., Williamstown
Delegate to KMA: C. C. Waldrop, M.D., Williamstown
Alternate Delegates: D. B. Shipp, M.D., Dry Ridge
F. R. Scroggin, M.D., Dry Ridge

Graves
President: Thomas B. Stone, M.D., Mayfield
Vice-President: Donald C. Haugh, M.D., Mayfield
Secretary-Treasurer: Charles D. LeNeave, M.D., Mayfield
Delegate to KMA: Charles D. LeNeave, M.D., Mayfield
Alternate Delegate: Charlene Hill, M.D., Mayfield

Green
President: George C. Cheatham, M.D., Greensburg
President-Elect: K. J. S. DeSimone, M.D., Greensburg
Secretary: K. J. S. DeSimone, M.D., Greensburg
Delegate to KMA: K. J. S. DeSimone, M.D., Greensburg
Alternate Delegate: H. B. Huntsman, M.D., Greensburg

Harlan
President: Kenneth Wier, M.D., Lynch
Vice-President: Paul M. Walstad, M.D., Harlan
Secretary-Treasurer: Gordon Hollins, M.D., Harlan
Delegate to KMA: Howard L. Elliot, M.D., Harlan
Alternate Delegate: Gilbert Hamilton, M.D., Harlan

Harrison
President: Major S. Foster, M.D., Cynthiana
Vice-President: Joe A. Nichols, M.D., Cynthiana
Secretary-Treasurer: Wilbur H. Wilson, M.D., Cynthiana
Delegate to KMA: Don R. Stephens, M.D., Cynthiana
Alternate Delegate: Joe A. Nichols, M.D., Cynthiana

Medical Assistants To Meet May 19-21 in Lexington

The Kentucky Society, American Association of Medical Assistants, will be holding its Tenth Annual Convention at the Holiday Inn North, Lexington on May 19-21.

Several informative talks are to be presented to carry out the convention theme of "Joining Hands With AAMA". Four Lexington physicians will be among the guest speakers on the program. They are J. Farra Van Meter, M.D., Lloyd Mayer, M.D., Z. S. Gierlach, M.D., and James B. Holloway, M.D., who is President of the Fayette County Medical Society.

PHYSICIAN'S ASSISTANT AVAILABLE

Male, age 28, married, wife an R.N., has B.S. in biology, 4 years as Navy Medical Corpsman, total of 9 years in medical fields; for additional details on this or other dedicated applicants, call collect 1-513-221-1112, or write:

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Chicken Vegetable	68	Cream of Potato	105
Turkey Noodle	72	Cream of Mushroom	131
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the 3 phases of Eve



All women are not equal in their endogenous hormonal output. And, while all oral contraceptives are fundamentally effective, they exhibit **differences in their activity levels and estrogen-progestogen ratios that affect different women differently**—in both short and long-term use. Some brands may be insufficient for the woman's needs or else may exceed them.

Searle offers a family of O.C. products that covers the range of women's needs to help you provide the right pill for the right woman at the right time.

References **1.** Editorial: Oral Contraceptives. Which Pill for Which Patient? Patient Care *3*:90-115 (Feb.) 1969 and *4*:135-145 (June 15) 1970. **2.** Greenblatt, R. B. Progestational Agents in Clinical Practice. Med. Sci. *18*:37-49 (May) 1967. **3.** Kistner, R. W: Gynecology: Principles and Practice, ed. 2, Chicago, Year Book Medical Publishers, 1971. **4.** Kistner, R. W. The Pill: Facts and Fallacies About Today's Oral Contraceptives, New York, Delacorte Press, 1968. **5.** Nelson, J. H. Clinical Evaluation of Side Effects of Current Oral Contraceptives, J. Reprod. Med. *6*:50-55 (Feb.) 1971. **6.** Orr, G. W. Oral Progestational Agents: Therapy and Complications, S. Dakota J. Med. *22*:11-17 (Jan.) 1969

the Ovulen phase

Most women* with a **balanced hormone profile a** **normal menses** do best on a middle-of-the-road p that is neither estrogen dominant nor strongly progestogen dominant.

(*Typical clues—normal body build and breasts feminine appearance, healthy skin and hair. Vagin cytology slide—balanced "pink and blue.")

Some women having problems on other O.C.s might do well on Ovulen.

Ovulen has a distinctive hormonal balance that combines moderate estrogenic activity with a slig progestogen dominance. It has an excellent recor of patient acceptance.

Ovulen®

Each white tablet contains: ethynodiol diacetate 1 mg./mestranol 0.1 mg

SEARLE

For brief summary of prescribing information, see following page.



the Demulen phase

Many women* who secrete **more estrogen** than most do well on a pill with lower estrogen activity and an increased progestogen overbalance.

(*Typical clues—shorter, plumper, full-breasted, with glowing skin and no wrinkles. Vaginal cytology slide "pink.")

Some women with special conditions that may be aggravated by higher estrogen-activity products may do better on this ratio.

Demulen combines minimal estrogenic activity with a moderate ratio of progestogen overbalance. It is particularly well suited to the young when low-dose (activity) is preferred. Demulen offers little risk of the most potent progestogen side effects; early breakthrough bleeding is often transient.

Demulen®

Each white tablet contains: ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg

Each pink tablet in Ovulen-28* and Demulen*-28 is a placebo, containing no active ingredients.

Both Ovulen and Demulen are available in 21- and 28-pill schedules.

the Enovid-E phase

Some women* who secrete **less estrogen** than most do best on a pill with a moderate estrogen overbalance.

(*Typical clues—oily complexion, acne, hirsutism, masculinity, flat chest. Vaginal cytology slide—"blue.")

Patients with estrogen deficiency may show:

premenopausal syndrome
early-cycle bleeding
scanty menses
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increased appetite
steady weight gain
vaginal candidiasis

Enovid-E not only provides increased estrogenic activity with low progestogen activity, but also contains the only progestogen that is not antiestrogenic. Therefore it offers less risk of high-dose progestogen side effects.

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Each tablet contains: norethynodrel 2.5 mg./mestranol 0.1 mg.

Oral contraceptives are complex medications and, after reference to the prescribing information, should be prescribed with discriminating care.

for the 3 phases of Eve:

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Demulen®

Each white tablet contains:
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Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possit influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adren hepatic or uterine function awaits further study. A decrease in glucose toleran has been observed in a significant percentage of patients on oral contrace tives. The mechanism of this decrease is obscure. For this reason, diabetic p tients should be carefully observed while receiving Ovulen or Demulen thera The age of the patient constitutes no absolute limiting factor, although treatme with Ovulen or Demulen may mask the onset of the climacteric. The patholog should be advised of Ovulen or Demulen therapy when relevant specimens a submitted. Susceptible women may experience an increase in blood pressu following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated betwe use of oral contraceptives and the following serious adverse reactions: thromb phlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relatio ship has been neither confirmed nor refuted for the following serious adver reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving o contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdor inal cramps and bloating), breakthrough bleeding, spotting, change in menstru flow, amenorrhea during and after treatment, edema, chloasma or melasm breast changes (tenderness, enlargement and secretion), change in weig (increase or decrease), changes in cervical erosion and cervical secretions, su pression of lactation when given immediately post partum, cholestatic jaundic migraine, rash (allergic), rise in blood pressure in susceptible individuals ar mental depression.

Although the following adverse reactions have been reported in users oral contraceptives, an association has been neither confirmed nor refute anovulation post treatment, premenstrual-like syndrome, changes in libid changes in appetite, cystitis-like syndrome, headache, nervousness, diz ness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiform erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contr ceptives: hepatic function: increased sulfobromophthalein retention and oth tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and thyroid function: increase in PBI and butanol extractable protein bound iodir and decrease in T^3 uptake values; metyrapone test and pregnanediol dete mination.

References: 1. Royal College of General Practitioners: Oral Contrace tion and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 19 **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmona Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearir Age, Brit. Med. J. *2*:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Inves gation of Relation Between Use of Oral Contraceptives and Thromboembo Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. **4.** Sartwe P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboen bolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Ame J. Epidem. *90*:365-380 (Nov.) 1969.

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Actions—Enovid-E acts to prevent ovulation by inhibiting the output gonadotropins from the pituitary gland. Enovid-E depresses the output of bo the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Indication—Enovid-E is indicated for oral contraception.

The *Special Note, Contraindications, Warnings, Precautions* and *Adver Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E ar should be observed when prescribing Enovid-E.

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Secretary-Treasurer: Jack D. Bland, M.D., Henderson
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Alternate Delegates: Tom Evans, M.D., Henderson
Roy Montgomery, M.D., Henderson

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Vice-President: Jack L. Hamman, M.D., Madisonville
Secretary-Treasurer: Kenneth P. Haywood, M.D., Madisonville
Delegates to KMA:
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Kenneth P. Haywood, M.D., Madisonville
Alternate Delegates:
M. Eugene Arnold, M.D., Madisonville
Ferris I. Larsen, M.D., Earlington

Laurel
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Vice-President: Robert E. Pennington, M.D., London
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Vice-President: E. C. Bowling, M.D., Stanford
President-Elect: T. Julian Wright, M.D., Stanford
Secretary-Treasurer: Giles Stephens, M.D., Stanford
Delegate to KMA: E. C. Bowling, M.D. Stanford
Alternate Delegate: Giles Stephens, M.D., Stanford

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President: Max C. Salb, M.D., Kuttawa
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President-Elect: Max C. Salb, M.D., Kuttawa
Secretary-Treasurer: Mort H. Moseley, M.D., Eddyville
Delegate to KMA: Mort H. Moseley, M.D., Eddyville
Alternate Delegate: Max C. Salb, M.D., Kuttawa

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President-Elect: W. G. Edds, M.D., Calhoun
Secretary: Samuel E. Scott, M.D., Livermore
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Alternate Delegate: W. G. Edds, M.D., Calhoun

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(Continued from page 327)

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Pre-Sate®
(chlorphentermine HCl)
CAUTION: Federal law prohibits dispensing without prescription.
Indications: Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (*i.e.*, several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.
Contraindications: Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.
Warnings: When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexigenic effect; discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.
Drug Dependence: Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.
Usage In Pregnancy: The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.
Usage In Children: Not recommended for use in children under 12 years of age.
Precautions: In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorexic agent and a restrictive dietary regimen.
Adverse Reactions: Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.
Dosage and Administration: The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.
Overdosage: Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.
Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.
How Supplied: Each Pre-Sate (chlorphentermine hydrochloride) tablet contains the equivalent of 65 mg chlorphentermine base; bottles of 100 and 1000 tablets.
Full information available on request.

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Division, Warner-Lambert Company
Morris Plains, New Jersey 07950

for the practical generation

Pre-Sate®

(chlorphentermine HCl)



the trend is toward our kind of anorectic

Not a controlled drug under the Comprehensive Drug Abuse Prevention and Control Act

- low potential for abuse
- less CNS stimulation than with d-amphetamine or phenmetrazine

Effective anorectic adjunct to your program of caloric restriction and diet re-education

- weight loss comparable to d-amphetamine and phenmetrazine, superior to placebo
- convenient one-a-day dosage

P-21-B/W

Pre-Sate® (chlorphentermine HCl)...the increasingly practical appetite suppressant



When you select this familiar antibiotic for IV infusion you have available a broad dosage rang that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections.

In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomyc hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in wate But when 4 grams or more per day is given, Lincocin should be diluted in n less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

ections caused by susceptible strains
neumococci, streptococci, and
phylococci, including penicillin-
istant strains. Staphylococcal strains
istant to Lincocin (lincomycin
drochloride, Upjohn) have been
overed. Before initiating therapy,
ture and susceptibility studies should
performed. Lincocin has proved
uable in treating patients hyper-
sitive to penicillin or cephalosporins,
e Lincocin does not share
igenicity with these compounds.
wever, hypersensitivity reactions
e been reported, some of these in
ients known to be sensitive to
icillin.

ll tolerated at infusion site: Lincocin
avenous infusions have not
duced local irritation or phlebitis,
n given as recommended. Lincocin
sually well tolerated in patients who
hypersensitive to other drugs.
vertheless, Lincocin should be used
tiously in patients with asthma or
nificant allergies.

patients with impaired renal function,
recommended dose of Lincocin
uld be reduced to 25—30% of
dose for patients with normal
ney function. Its safety in
gnant patients and in infants
than one month of age has
been established.

icocin may be used with other
microbial agents: Since Lincocin
able over a wide pH range, it is
able for incorporation in
avenous infusions; it also may be
administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.





Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatı *Skin and mucous membranes*—Skin rz urticaria, vaginitis, and rare instances c foliative and vesiculobullous dermatitis been reported. *Liver*—Although no dire lationship to liver dysfunction is establi jaundice and abnormal liver function (particularly serum transaminase) have observed in a few instances. *Cardiovas* —Instances of hypotension following p teral administration have been repo particularly after too rapid IV admin tion. Rare instances of cardiopulmonar rest have been reported after too rapi administration. If 4.0 grams or more ac istered IV, dilute in 500 ml of fluid administer no faster than 100 ml per *Special senses*—Tinnitus and vertigo been reported occasionally. *Local reac* —Excellent local tolerance demonstrat intramuscularly administered Linc (lincomycin hydrochloride). Reports of following injection have been infreq Intravenous administration of Lincoc 250 to 500 ml of 5% glucose in dis water or normal saline has produce local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *50(* Capsules—bottles of 24 and 100. *S. Solution, 300 mg per ml*—2 and 10 ml and 2 ml syringe. *Syrup, 250 mg per* —60 ml and pint bottles.

For additional product information, co the package insert or see your Up representative.

MED B-6-S (KZL-7) JA71-

The Upjohn Company
Kalamazoo, Michigan 49001

Upjo

On the next two pages:
An important announcement
for you and your patients.

New from Colgate:

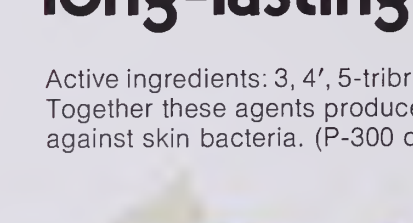
Superior Gram negativ



Effective against Gram positive bacteri and Gram negative bacteria.

As mild as any other toilet soap. With unsurpassed substantivity for long-lasting antibacterial action.

Active ingredients: 3, 4′, 5-tribromosalicylanilide and 4, 2′,4′-trichloro-2-hydroxy diphenyl ether. Together these agents produce a synergistic effect that provides broad spectrum protection against skin bacteria. (P-300 does not contain hexachlorophene.)



The new all-purpose soap for homes, offices, hospitals, schools, restaurants, food processing plants, laboratories, etc.

P-300: Superior protectio

bacteriostasis in a bar soap.

P-300–superior to other antibacterial bar soaps. Proven effective against 25 of 31 cultures representing bacteria of major concern in nosocomial infections and cross-infections.*

BACTERIA	A.T.C.C. No.	P-300	Soap "D"	Soap "S"
Gram Positive				
Staphylococcus aureus	8094	●●●	●	●
Staphylococcus aureus	11371	●●●	●	●
Staphylococcus aureus	8096	●●●	●	●
Staphylococcus aureus	10390	●●●	●	●
Staphylococcus aureus	6342	●●●	●	●
Staphylococcus epidermidis	17917	●●●	●	●
Staphylococcus sp.	13565	●●●	●	●●
Mycobacterium smegmatis	19420	●●●	●●	●●
Listeria monocytogenes	13932	●●●	●●	●●●
Streptococcus pyogenes	7958	●	●	●
Streptococcus mitis	903	●	●	●
Streptococcus sp.	12403	●	●	●
Bacillus anthracis	14578	●	●●	●●
Gram Negative				
Alcaligenes tolerans	19359	●●●	●●	●●●
Neisseria gonorrhoeae	19424	●●	●	●
Neisseria menigitidis	13077	●●●	●	●
Proteus vulgaris	8427	●●●	●	○
Escherichia coli	10536	●	○	○
Escherichia coli	11229	●	○	○
Escherichia coli	11698	●	○	○
Klebsiella pneumoniae	12833	●	○	○
Salmonella typhi	9993	●	○	○
Salmonella typhi	6539	●	○	○
Salmonella typhimurium	13311	●	○	○
Herellea sp.	11959	●	○	○
Pseudomonas aeruginosa	10145	○	○	○
Pseudomonas aeruginosa	7700	○	○	○
Pseudomonas aeruginosa	9027	○	○	○
Pseudomonas aeruginosa	14210	○	○	○
Proteus rettgeri	9250	○	○	○
Proteus morganii	9237	○	○	○

KEY: ZONE OF INHIBITION
●●● = 18.0 mm or larger
●● = 12.0 mm to 17.9 mm
● = Less than 11.9 mm
○ = No Inhibition

Test Method: The three antibacterial soaps were evaluated by means of the standard Protein Adsorption Test, conducted by a recognized independent laboratory, using A.T.C.C. organisms.

*The bacteria were those most frequently named in a nationwide survey of 334 hospitals.

or you and your patients.

For samples of P-300 and product literature, please write:

Professional Services Department
COLGATE-PALMOLIVE COMPANY
740 North Rush Street
Chicago, Illinois 60611

Current G.U. Research

Gantanol® in animals
(sulfamethoxazole)



rol



12.5 mg sulfamethoxazole/kg of body weight



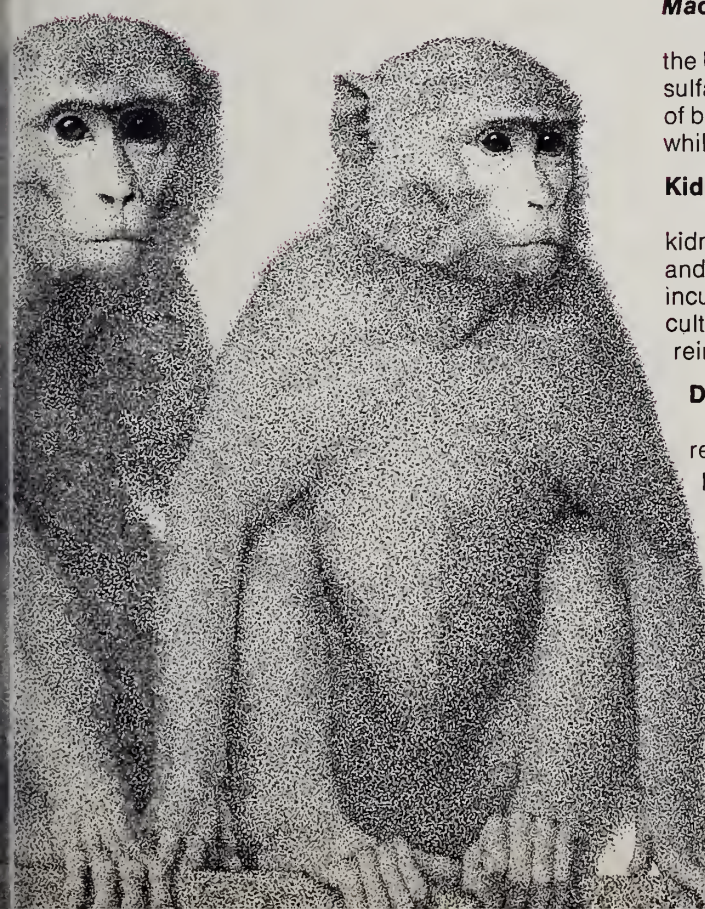
50 mg of sulfamethoxazole/kg of body weight



100 mg of sulfamethoxazole/kg of body weight

Tissue slice technique maps renal distribution in animal studies

Please note that while the method described may add to the knowledge of how antibacterial agents are distributed in the kidney of this animal, no conclusions can be drawn from this study relative to the drug's distribution, effect or use in humans, as it is not possible to extrapolate animal data to humans.



Gantanol® (sulfamethoxazole) administered to *Macaca speciosa* monkeys

Working with *Macaca speciosa* monkeys, researchers at the University of Arkansas Medical Center administered sulfamethoxazole at doses of 12.5 mg, 50 mg and 100 mg/kg of body weight. Each dosage level was given to three animals while three were left untreated as controls.*

Kidneys inoculated with *Staphylococcus aureus*

After 2½ hours, the 12 monkeys were sacrificed and their kidneys frozen with CO_2. Sagittal tissue slices were prepared and placed on blood agar bacteriological plates. They were incubated at 37°C. for 1½ hours. *Staphylococcus aureus* broth culture was then used to inoculate the tissue and slices were reincubated.*

Dark staining reveals heavy bacterial growth

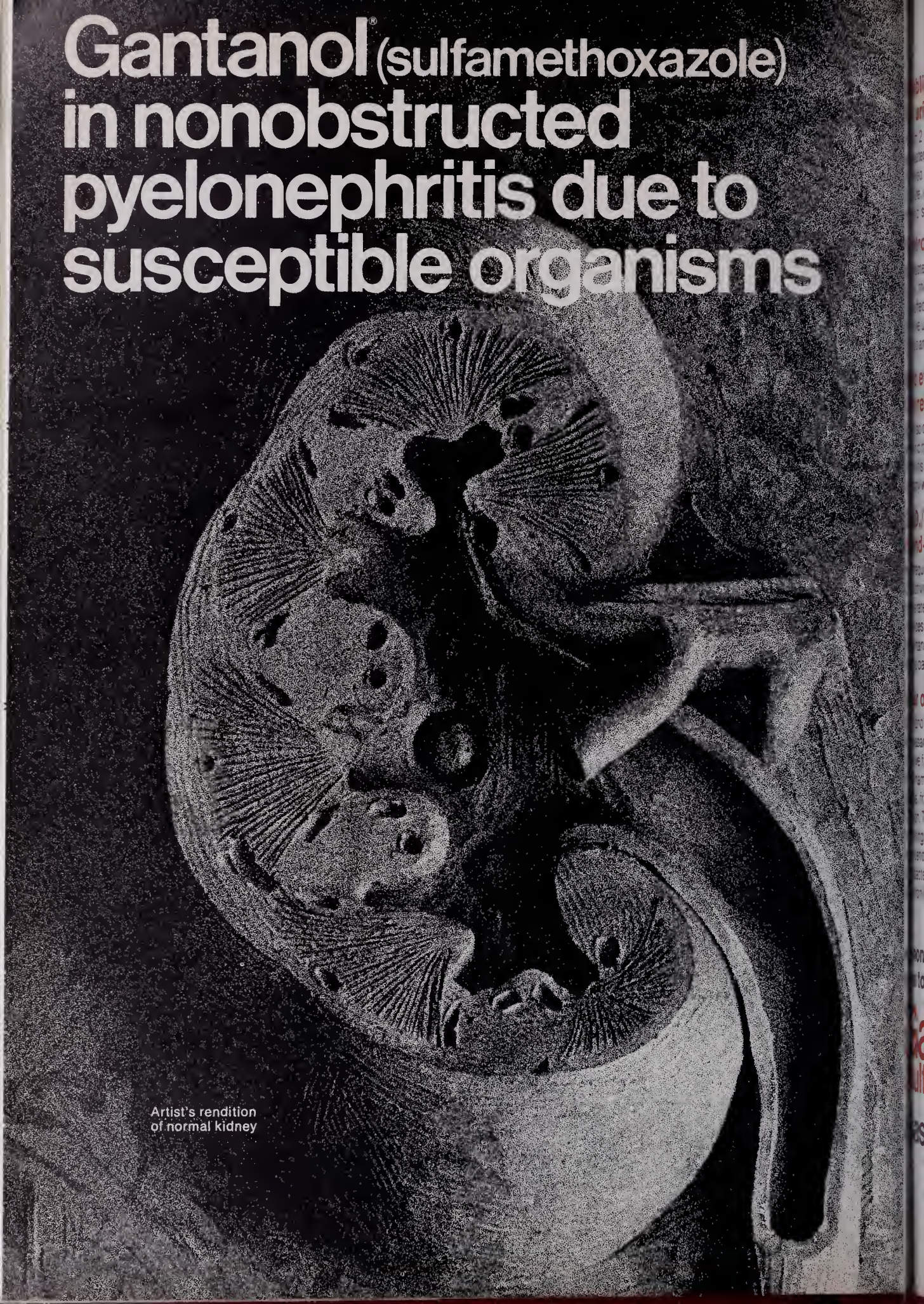
A solution of triphenyltetrazolium chloride, which turns a reddish purple in the presence of bacteria, was added to the plates after 6 hours. Renal slices from the untreated control animals consistently demonstrated heavy bacterial growth, as evidenced by dark staining.*

Distribution throughout *Macaca speciosa* renal parenchyma

At the dosage of 12.5 mg/kg of body weight, a diffuse stain pattern indicated partial inhibition of bacterial growth. Renal slices from monkeys given the 50 and 100 mg/kg doses showed no staining, indicating complete bacterial inhibition and *suggesting* antibacterial distribution throughout the parenchyma.*

*Mobley, J. E.; Redman, J. F., and Robbins, R. P.: *Surg. Gynec. Obstet.*, *131*:1122, 1970.

Gantanol® (sulfamethoxazole) in nonobstructed pyelonephritis due to susceptible organisms



Artist's rendition of normal kidney

ıblishes antibacterial levels in blood urine in from 2 to 3 hours

m 2 to 3 hours of the initial 2-Gm adult dose, effective acterial levels of Gantanol® (sulfamethoxazole) are ved in both blood and urine. This prompt, early treatment ute nonobstructed pyelonephritis may help avert possible iic sequelae.

trols primary bacterial offenders

acterial Gantanol (sulfamethoxazole) controls susceptible *i*, the most common cause of urinary tract infections. It is effective against other susceptible gram-negative and gram- ve urinary pathogens such as *Klebsiella-Aerobacter, Staph. s* and *Proteus mirabilis*.

o effective in nonobstructed chronic recurrent urinary tract infections

lso common for the elderly and debilitated to develop nic nonobstructed urinary tract infections, primarily pyelo- ritis and cystitis. Such cases often respond satisfactorily to py with Gantanol.

D./T.I.D. schedule gives nd-the-clock coverage

equent 1-Gm doses can provide up to 12 hours of antibacte- ctivity. The *b.i.d.* dosage is recommended for mild to erate infections; the *t.i.d.* for the more severe u.t.i. Gantanol des coverage around the clock—coverage that is especially rtant during the hours of sleep, when urinary retention s bacterial proliferation.

ır option: tablets or suspension

anol is available in two convenient dosage forms—tablets or asant-tasting suspension. It is generally well tolerated with ve freedom from complications. The usual precautions with namide therapy should be observed, including adequate fluid e, frequent c.b.c.'s and urinalyses with microscopic exam- n. The most common side effects reported are nausea, ting and diarrhea. (It should also be noted that the increasing uency of resistant organisms is a limitation of usefulness of acterial agents, including sulfonamides, especially ronic or recurrent u.t.i.)

nonobstructed pyelonephritis to susceptible organisms

Gantanol®
ulfamethoxazole)

asic therapy

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in acute, recurrent or chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris*) and in the absence of obstructive uropathy or foreign bodies.

***Note:* Since *in vitro* sulfonamide sensitivity tests are not always reliable, carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media of patients receiving sulfonamides. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents, including sulfonamides, especially in chronic or recurrent urinary tract infections.**

Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Sulfonamide hypersensitivity; infants less than 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis); pregnancy at term and during nursing period.

Warnings: Safe use in pregnancy has not been established, and teratogenicity potential has not been thoroughly investigated. Sulfonamides will not eradicate or prevent sequelae to group A streptococcal infections, *i.e.,* rheumatic fever, glomerulonephritis. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; early clinical signs such as sore throat, fever, pallor, purpura or jaundice may indicate serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination are recommended frequently during sulfonamide therapy. Clinical data are insufficient on prolonged or recurrent therapy in chronic renal diseases of children under 6 years.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

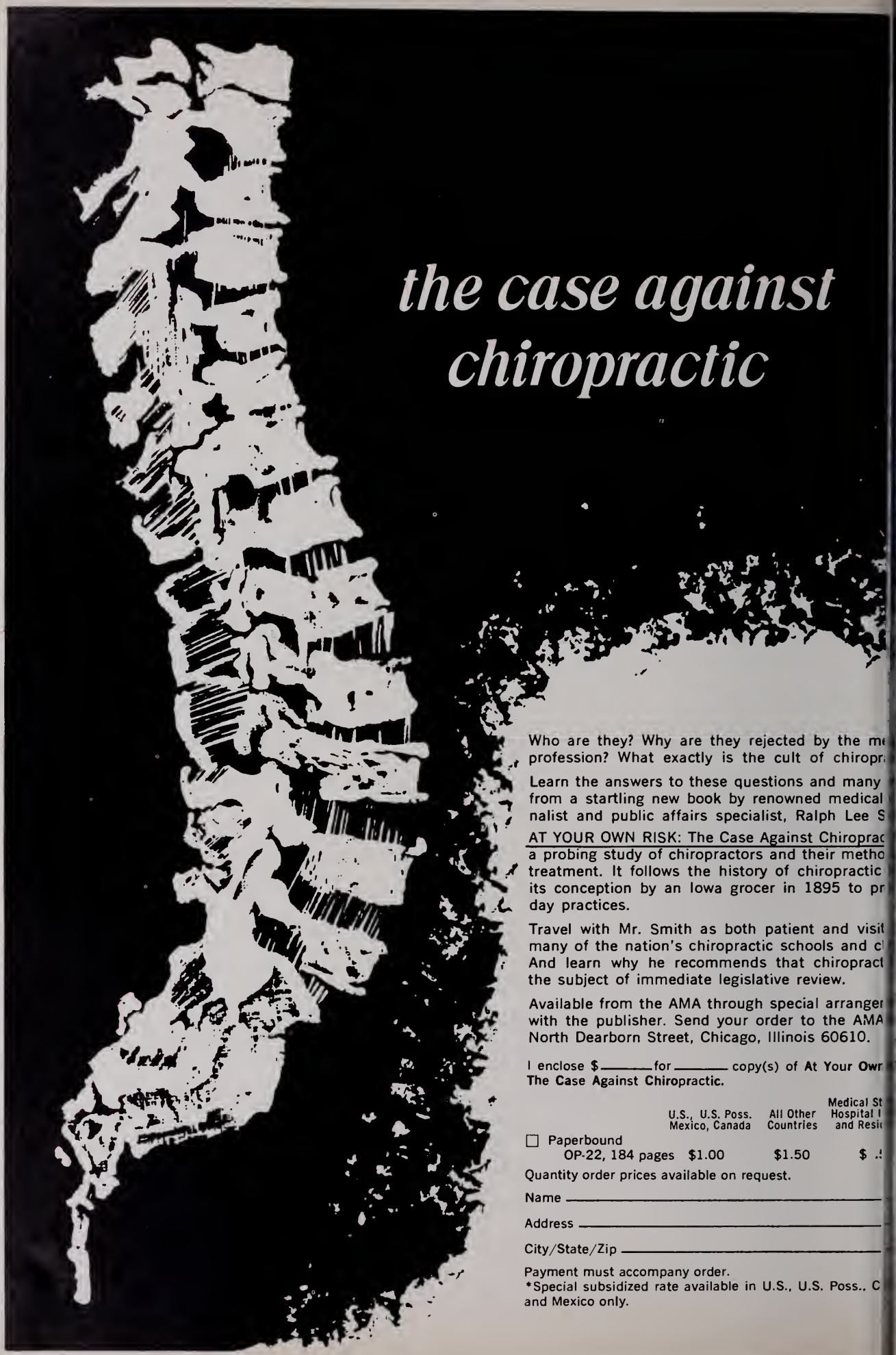
Adverse Reactions: *Blood dyscrasias:* agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *allergic reactions:* erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *gastrointestinal reactions:* nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; and *miscellaneous reactions:* drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age, except adjunctively with pyrimethamine in congenital toxoplasmosis. Usual dosage is as follows: *Adults*—2 Gm (4 tabs or teasp.) initially, then 1 Gm (2 tabs or teasp.) *b.i.d.* or *t.i.d.* depending on severity of infection. *Children*—0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, followed by 0.25 Gm/20 lbs (½ tab or teasp.) *b.i.d.* Maximum dose for children should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110



the case against chiropractic

Who are they? Why are they rejected by the me
profession? What exactly is the cult of chiropr

Learn the answers to these questions and many
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140/90 is normal blood pressure...or is it?

An extensive study based on nearly 4 million life insurance policies suggests that a blood pressure reading of 140/90 requires close medical supervision.

Study Findings. Twelve years ago the Society of Actuaries reported on an extensive study based on the lives and deaths represented by almost a million life insurance policies. From this vast survey—"The Build and Blood Pressure Study"[1]—insurance experts concluded that:

Blood pressure above 140/90 is accompanied by increased morbidity and requires close medical attention.

Even small increments in either systolic or diastolic blood pressure progressively and steeply shorten life expectancy.

Other Studies. Studies conducted with large numbers of patients since that time have echoed the above findings. Two studies published in 1970—the VA Cooperative Study Group on "Effects of Treatment on Morbidity in Hypertension"[2] and the "Framingham Study"[3]—suggest that treatment of even mild hypertension may, over time, offer significant benefits to the patient.

Another Point of View. Although a growing body of studies suggests that treatment of mild hypertension is warranted, medical opinion is not unanimous. Some clinicians recommend that drug treatment for mild hypertension be reserved for patients with additional risk factors such as smoking, high cholesterol



levels, heart or kidney involvement, or a family history of vascular disease. Dr. Walter M. Kirkendall stated this position in his recent paper "What's With Hypertension These Days?"[4] Discussing the management of hypertension in patients with a sustained diastolic pressure up to 100 mm Hg, he said: "Generally, I do not recommend antihypertensive therapy unless patient's blood pressure approaches the upper limit for the group and a number of adverse factors exist, such as male sex, family history of vascular disease, youth, evidence of heart or kidney involvement."

Drug Therapy for Hypertension. Although opinion varies on when to start drug therapy for mild hypertension, many physicians agree that treatment should start with a thiazide diuretic such as HydroDIURIL. For the adult patient, the usual starting dosage is 50 mg b.i.d. Dosage adjustments are recommended as the patient responds to treatment. The patient whose therapy begins with HydroDIURIL frequently can continue to benefit from it, because HydroDIURIL usually maintains its antihypertensive effect even when therapy is prolonged.

MSD
MERCK SHARP & DOHME

25- and 50-mg tablets

HydroDIURIL®

(Hydrochlorothiazide|MSD)

Therapy to Start With

For a brief summary of prescribing information, please see next page.

1. Society of Actuaries, *The Build and Blood Pressure Study*, 1959.
2. Veterans Administration Cooperative Study Group on Antihypertensive Agents, "Effects of Treatment on Morbidity in Hypertension," JAMA *213*:1143-1152, Aug. 17, 1970.
3. Kannel, William B., *et al.*: "Epidemiologic Assessment of the Role of Blood Pressure in Stroke—The Framingham Study," JAMA *214*:301-310, Oct. 12, 1970.
4. Kirkendall, Walter M.: "What's With Hypertension These Days?" Consultant, Jan. 1971.

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CONTRAINDICATIONS: Anuria; increasing azotemia and oliguria during treatment of severe progressive renal disease. Known sensitivity to this compound. Nursing mothers; if use of drug is deemed essential, patient should stop nursing.

WARNINGS: May precipitate or increase azotemia. Use special caution in impaired renal function to avoid cumulative or toxic effects. Minor alterations of fluid and electrolyte balance may precipitate coma in hepatic cirrhosis.

When used with other antihypertensive drugs, careful observation for changes in blood pressure must be made, especially during initial therapy. Dosage of other antihypertensive agents, especially ganglion blockers, must be reduced by at least 50% because HydroDIURIL potentiates their action.

Stenosis and ulceration of the small bowel causing obstruction, hemorrhage, and perforation have been reported with the use of enteric-coated potassium tablets, either alone or with nonenteric-coated thiazides. Surgery was frequently required, and deaths have occurred. Such formulations should be used only when indicated and when dietary supplementation is impractical. Discontinue immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occurs.

Thiazides cross placenta and appear in cord blood. In women of childbearing age, potential benefits must be weighed against possible hazards to fetus, such as fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

The possibility of sensitivity reactions should be considered in patients with a history of allergy or bronchial asthma. The possibility of exacerbation or activation of systemic lupus erythematosus has been reported for sulfonamide derivatives, including thiazides.

PRECAUTIONS: Check for signs of fluid and electrolyte imbalance, particularly if vomiting is excessive or patient is receiving parenteral fluids. Warning signs, irrespective of cause, are dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances. Hypokalemia may develop (especially with brisk diuresis) in severe cirrhosis; with concomitant steroid or ACTH therapy; or with inadequate electrolyte intake. Digitalis therapy may exaggerate metabolic effects of hypokalemia, especially with reference to myocardial activity. Hypokalemia may be avoided treated by use of potassium chloride or giving foc with a high potassium content. Similarly, any chlori deficit may be corrected by use of ammonium chlori (except in patients with hepatic disease) and larg prevented by a near normal salt intake. Hypochloren alkalosis occurs infrequently and is rarely severe. severely edematous patients with congestive failure renal disease, a low salt syndrome may occur if dieta salt is unduly restricted, especially during hot weath

Thiazides may increase responsiveness to tubo rarine. The antihypertensive effect of the drug may enhanced in the postsympathectomy patient. Arter responsiveness to norepinephrine is decreased, nec sitating care in surgical patients. Discontinue drug hours before elective surgery. Orthostatic hypotensi may occur and may be potentiated by alcohol, barb urates, or narcotics.

Pathological changes in the parathyroid glands wi hypercalcemia and hypophosphatemia have been se in a few patients on prolonged thiazide therapy. T effect of discontinuing thiazide therapy on serum c cium and phosphorus levels may be helpful in asse ing the need for parathyroid surgery in such patien Parathyroidectomy has elicited subjective clinical i provement in most patients, but has no effect hypertension. Thiazide therapy may be resumed af surgery.

Use cautiously in hyperuricemic or gouty patien gout may be precipitated. May affect insulin requi ments in diabetics; may induce hyperglycemia a glycosuria in latent diabetics.

ADVERSE REACTIONS: Rare reactions inclu thrombocytopenia, leukopenia, agranulocytosis, apl tic anemia, cholestasis, and pericholangiolitic hepatit Nausea, vomiting, diarrhea, dizziness, vertigo, par thesias, transient blurred vision, sialadenitis, purpu rash, urticaria, photosensitivity, or other hypersen tivity reactions may occur. Cutaneous vasculitis p cipitated by thiazide diuretics has been reported elderly patients on repeated and continuing exposu to several drugs. Scattered reports have link thiazides to pancreatitis, xanthopsia, neonatal thro bocytopenia, and neonatal jaundice. When adver reactions are moderate or severe, the dosage thiazides should be reduced or therapy withdraw

For more detailed information, consult your MSD Representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD
MERCK SHARP DOHME

The girth control pill



Tepanil® Ten-tab®

(continuous release form)

(diethylpropion hydrochloride, N.F.)

When girth gets out of control, TEPANIL can provide sound support for the weight control program you recommend. TEPANIL reduces the appetite—patients enjoy food but eat less. Weight loss is significant—gradual—yet there is a relatively low incidence of CNS stimulation.

Contraindications: Concurrently with MAO inhibitors, in patients hypersensitive to this drug; in emotionally unstable patients susceptible to drug abuse.

Warning: Although generally safer than the amphetamines, use with great caution in patients with severe hypertension or severe cardiovascular disease. Do not use during first trimester of pregnancy unless potential benefits outweigh potential risks.

Adverse Reactions: Rarely severe enough to require discontinuation of therapy, unpleasant symptoms with diethylpropion hydrochloride have been reported to occur in relatively low incidence. As is characteristic of sympathomimetic agents, it may occasionally cause *CNS effects* such as insomnia, nervousness, dizziness, anxiety, and jitteriness. In contrast, CNS depression has been reported. In a few epileptics an increase in convulsive episodes has been reported. Sympathomimetic *cardiovascular effects* reported include ones such as tachycardia, precordial pain, arrhythmia, palpitation, and increased blood pressure. One published report described T-wave changes in the ECG of a healthy young male after ingestion of diethylpropion hydrochloride; this was an isolated experience, which has not been reported by others. *Allergic phenomena* reported include such conditions as rash, urticaria, ecchymosis, and erythema. *Gastrointestinal effects* such as diarrhea, constipation, nausea, vomiting, and abdominal discomfort have been reported. Specific reports on the hematopoietic system include two each of bone marrow depression, agranulocytosis, and leukopenia. A variety of miscellaneous adverse reactions have been reported by physicians. These include complaints such as dry mouth, headache, dyspnea, menstrual upset, hair loss, muscle pain, decreased libido, dysuria, and polyuria.

Convenience of two dosage forms: TEPANIL Ten-tab tablets: One 75 mg tablet daily, swallowed whole, in midmorning (10 a.m.), TEPANIL: One 25 mg. tablet three times daily, one hour before meals. If desired, an additional tablet may be given in midevening to overcome night hunger. Use in children under 12 years of age is not recommended

1-3325 (2876)

Merrell

MERRELL-NATIONAL LABORATORIES
Division of Richardson-Merrell Inc.
Cincinnati, Ohio 45215



Painful night leg cramps...

unwelcome bedfellow for any patient– including those with arthritis, diabetes or PVD

- Prevents painful night leg cramps
- Permits restful sleep
- Provides simple convenient dosage— usually just one tablet at bedtime

Prescribing Infarmatian—Compositian: Eoch white, beveled, compressed tablet cantains: Quinine sulfote, 260 mg., Aminaphylline, 195 mg. **Indications:** Far the preventian ond treotment af nacturnol and recumbency leg muscle cromps, including those assacioted with arthritis, diobetes, voricase veins, thrambaphlebitis, arteriasclerasis ond static foat deformities. **Cantraindicatians:** Quinomm is cantroindicated in pregnancy because af its quinine cantent. **Precautions/Adverse Reactians:** Aminaphylline moy produce intestinol cromps in same instonces, ond quinine moy praduce symptams af cinchonism, such os tinnitus, dizziness, ond gastraintestinal disturbonce. Discantinue use if ringing in the ears, deafness, skin rash, ar visuol disturbonces accur. **Dasage:** One toblet upon retiring. Where necessary, dasoge moy be increased to one toblet following the evening meal and ane tablet upan retiring. **Supplied:** Bottles af 100 and 500 toblets.

Merrell

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Division af Richardsan-Merrell Inc.
Cincinnati, Ohia 45215

Trademark: Quinamm

Quinamm

(quinine sulfate 260 mg., aminophylline 195 mg.)

Specific therapy for night leg cramps.

Application

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1972 Annual Meeting — Kentucky Medical Association

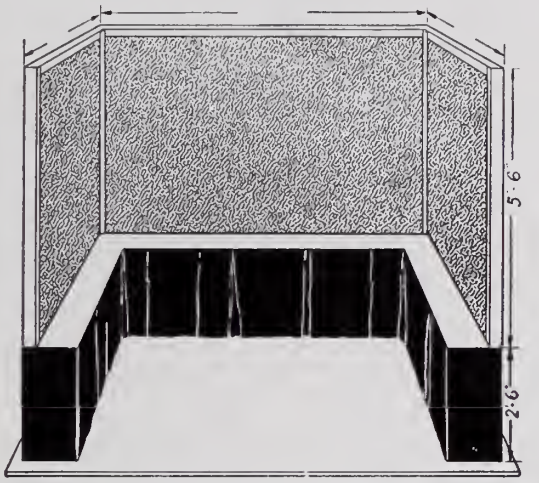
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of the KENTUCKY MEDICAL ASSOCIATION

April 13-14



Luxurious Accommodations

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ASPIRIN 5 GR.—PENTOBARBITAL 1/8 GR.

ETHICAL ANALGESIA (economical if prescribed in 100 units with privilege of refills)

PRESCRIBING INFORMATION: To relieve tension headaches and arthritic pains, 2 tablets q 4 h. Aspirin and pentobarbital begin their action promptly, continuing for about 4 hours. The small pentobarbital content gives no perceptible sedation. Pentobarbital is destroyed by the body and there is no accumulation. Synirin will supply any aspirin therapy with equal safety. Use aspirin with caution in peptic ulcer.

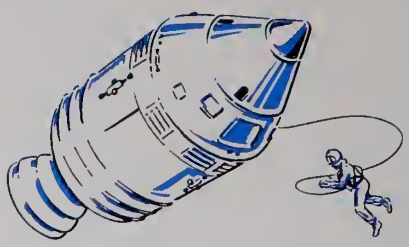
EACH UNCOATED TABLET CONTAINS:

Aspirin .....325 mg. (5 gr.)
Pentobarbital* .....8 mg. (1/8 gr.)
*May be habit forming.

Federal law prohibits dispensing without prescription
DISPENSED IN BOTTLES OF 100 AND 1000 TABLETS

WILLIAM P. POYTHRESS & COMPANY, INC.
RICHMOND, VIRGINIA 23261
Manufacturers of Ethical Pharmaceuticals Since 1856

A clinical supply of this new aspirin formulation may be requested.



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

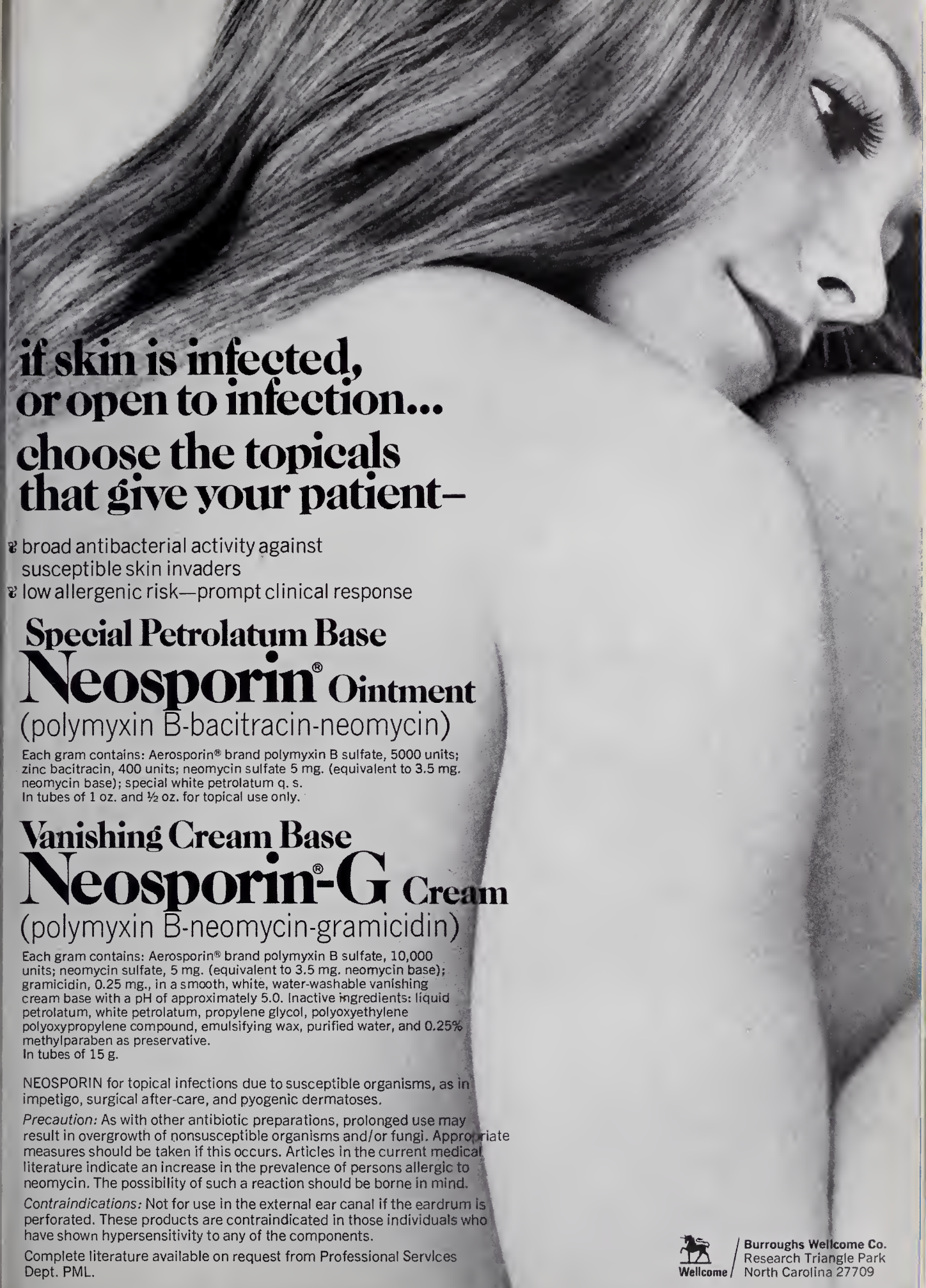
For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



if skin is infected, or open to infection...

choose the topicals that give your patient–

- broad antibacterial activity against susceptible skin invaders
- low allergenic risk—prompt clinical response

Special Petrolatum Base
Neosporin® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 5000 units; zinc bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

Vanishing Cream Base
Neosporin®-G Cream
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services Dept. PML.

Wellcome / **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709

Librium®
(chlordiazepoxide HCl)
and effectiveness

The antianxiety effectiveness of Librium (chlordiazepoxide HCl) has been demonstrated in more than a decade of varied use. Librium usually provides prompt, dependable relief of mild to severe clinically significant anxiety. It is indicated when reassurance and counseling are not enough and until, in the physician's judgment, anxiety has been reduced to tolerable, appropriate levels.

Effect on mental acuity: Usually minimal on proper maintenance dosage. (See Warnings in summary of prescribing information.)

Safety: An excellent clinical record. In general use, the most common side effects reported have been drowsiness, ataxia, and confusion, particularly in the elderly and debilitated.

Concomitant use: Is used as adjunctive antianxiety therapy concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, antihypertensive agents, diuretics, anticoagulants, anticholinergics and antacids. Although clinical studies have not established a cause and effect relationship, physicians should be aware that variable effects on blood coagulation have been reported very rarely in patients receiving oral anticoagulants and chlordiazepoxide hydrochloride.

in relief of clinically significant anxiety

Librium®
(chlordiazepoxide HCl)

5-mg, 10-mg, 25-mg capsules up to 100 mg daily in severe anxiety

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Supplied: Librium capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

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VOLUME 70 MAY 1972 NUMBER 5

The Journal of The KENTUCKY Medical Association

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OF
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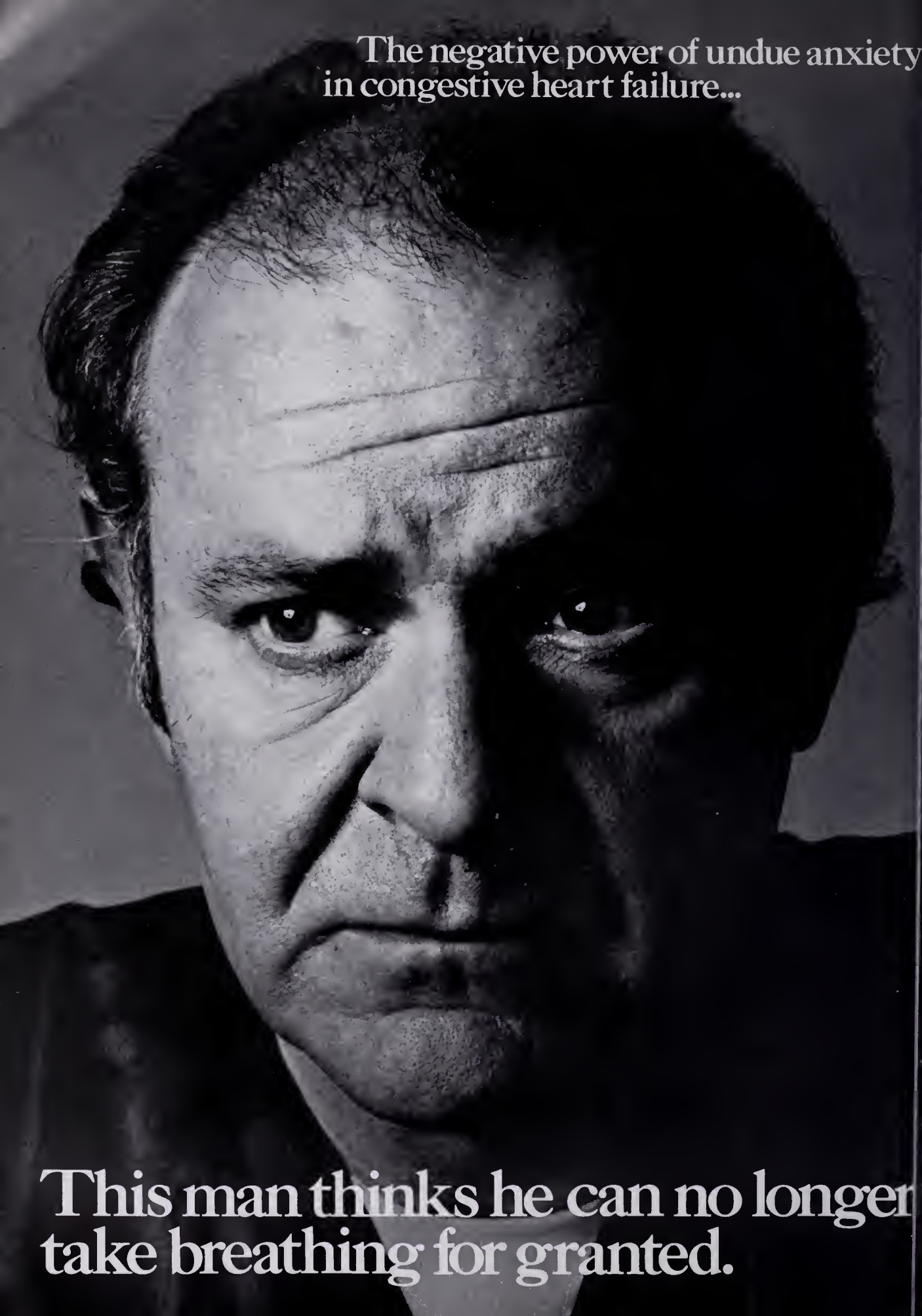
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The negative power of undue anxiety
in congestive heart failure...
This man thinks he can no longer
take breathing for granted.

Typical of many patients with congestive heart failure, he also suffers from severe anxiety, a psychic factor that may influence the character and degree of his symptoms, such as dyspnea. His apprehension may also deprive him of the emotional calm so important in maintenance therapy.

Aid in rehabilitation

Specific medical and environmental measures are often enhanced by the antianxiety action of adjunctive Libritabs (chlordiazepoxide). Libritabs can also facilitate treatment of the tense convalescent patient until antianxiety therapy is no longer required. Whereas in geriatrics the *usual daily dosage* is 5 mg two to four times daily, the *initial dosage* in elderly and debilitated patients should be limited to 10 mg or less per day, adjusting as needed and tolerated.

Concomitant use with primary agents

Libritabs is used concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, diuretics, antihypertensives, vasodilators and oral anticoagulants, whenever excessive anxiety or emotional tension adversely affects the clinical condition or response to therapy. Although clinical studies have not established a cause and effect relationship, physicians should be aware that variable effects on blood coagulation have been reported very rarely in patients receiving oral anticoagulants and chlordiazepoxide HCl.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

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Supplied: Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

The positive power of Libritabs®

(chlordiazepoxide)

5-mg, 10-mg, 25-mg tablets

t.i.d./q.i.d.

up to 100 mg daily

for severe anxiety accompanying congestive heart failure

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Roche Laboratories
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Nutley, N J. 07110

May 1957

The age of semi-synthetic penicillins begins at Beecham Research Laboratories.

The crucial experiment: conversion of 6-aminopenicillanic acid (6-APA) into benzylpenicillin by treatment with phenylacetyl chloride. We've come a long way since 1957. Over the past 14 years more than 3000 different semi-synthetic penicillins have been synthesized and evaluated by our staff. The fruits of their work are in your hands today.

Need we say more?

Prescribe the discoverer's brands:

Totacillin® ampicillin trihydrate
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and more to come

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☐Totacillin (ampicillin trihydrate) capsules equivalent to 250 mg. and 500 mg. ampicillin, for oral suspension equivalent to 125 mg./5 cc. and 250 mg./5 cc. ampicillin. ☐Pyopen (disodium carbenicillin) vials for injection equivalent to 1 gm. and 5 gm. of carbenicillin. ☐Bactocill (sodium oxacillin) capsules equivalent to 250 mg. and 500 mg. oxacillin and vials for injection equivalent to 500 mg. and 1 gm. oxacillin.

Volume 70 • May 1972

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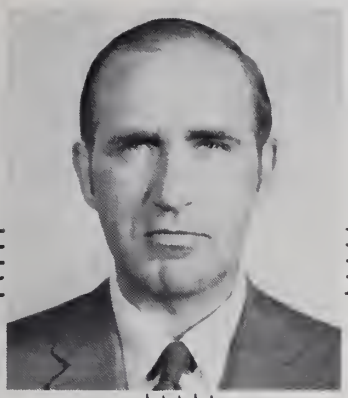
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MESSAGE FROM THE PRESIDENT



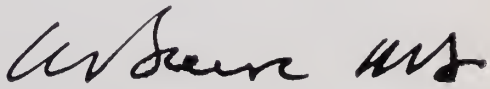
THE practicing physician in the United States ought to have the world's greatest public image, yet he does not. The reasons are all too apparent. There are those with ulterior motives who wish to discredit the medical profession. Public relations is too often thought of as high-powered to attain massive results. This type of public relations is a mediocre second-best to the type that is available to each of us at bargain-basement prices.

Each of us secs, and most importantly has the complete attention of several dozen public relations recipients daily. These are our patients, their families, and people who come with them to our offices. The initial impression made by our receptionists and nurses, and later by us will do more in our behalf than all the paid public relations efforts combined! This is obvious when an overwhelming majority of people surveyed liked their *own* physician, felt *his* charges were in line, felt he *gave* them enough time and was *competent*; conversely, in describing medicine in general the reverse was true down the lines.

This means we succeed admirably with people we get to know well enough to call patients, and terribly with the rest. It is this "rest" group we must reach. These are the ones that never get past the brusque receptionist, the angry nurses or overbearing bookkeeper. The ones we haven't taken adequate time with to explain problems in understandable terms. It is rarely the big things that cause hard feeling —rather, it's the minor understandings.

When a potential patient understands how little can be done for him on house calls when compared to an office or emergency room visit, he is usually more than willing to make the trip and be grateful rather than resentful for the extra inconvenience. When he merely gets a "no, I don't make house calls," he feels first, like a captive audience who has no say in the matter and secondly, a little bit "had" by the extra time, expense and inconvenience. The difference is in understanding and communication.

The efforts we expend to reach these misunderstood people through our office and hospital staffs and our own personal contacts will be more than generously repaid by the truly positive public relations generated. And not only that, it makes good sense.



This is the third in a series of articles written at the request of KMA President John S. Harter, M.D.

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 21-year-old divorced white gravida 3, para 2, abortus 0, had her last menstrual period November 15, 1969. Her membranes ruptured spontaneously March 15, 1970. She developed severe abdominal pain, nausea, vomiting and fever. She came to the emergency room of the hospital at 2:00 a.m., March 17, 1970. Examination revealed a temperature of 104.2 orally, pulse 104, blood pressure 108/60. Rales were present in the right chest; the left was clear. Abdominal examination revealed the uterus enlarged approximately the size of a 14 week gestation. The uterus was tender to palpation. There were no other masses palpable. No fetal heart tone was heard. The cervix was closed, with a maloderous discharge. The clinical impression was septic abortion.

At 8:00 a.m. she sustained a drop in blood pressure to 56/0, pulse 140, respiration 40. Oxygen by mask was started plus solu-cortef. As her response to this was negligible intravenous Aramine was given. She began having uterine contractions and passed the fetus and placenta at 1:30 p.m. with intravenous Pitocin stimulation. At 3:30 p.m. her blood pressure was below 60 mm, her pulse was weak and respirations 48, temperature 97. The urinary output was less than 20 cc per hour.

A chest x-ray was obtained when rales were detected in the right lung. Her blood pressure was maintained with Aramine drip. The urinary output was adequate.

Medical consultation was obtained. She was digitalized with Lanoxin IV; and given Lasix 20 mg IV and morphine 10 mg. There was improvement in her respiration, good urinary output, however her blood pressure remained at 100 systolic. She received packed cells in the afternoon of the 17th. Her CBC and BUN were normal. The prognosis was considered poor.

A cut down was necessary on the 19th to administer fluids and while pumping fluids in, to open the tubing, the patient suddenly sat up, gasped and experienced cardiac arrest. She was promptly resuscitated by the physicians present, was given intra-cardiac adrenalin, electroshock and an adequate airway. She expired at 1:20 a.m. on March 19, 1970. Her lungs seemed dry for the first few hours, however she remained cyanotic. The clinical impression was pulmonary embolus, following a septic abortion. There was no autopsy.

Comment

This case was considered a direct obstetrical preventable death with preventable factors on the part of the patient. It would seem that some interference with the pregnancy must have been attempted for she presented with a clinical impression of an attempted induced termination of pregnancy. Since an autopsy was not carried out one can only speculate as to the cause of death. Certainly a pulmonary embolus or an air embolus are the most likely events to cause her demise. This case again demonstrates the great value and need for autopsies in such deaths as these.

PUBLIC HEALTH PAGE

Tuberculosis Today†

WILLIAM P. MCELWAIN, M.D., M.P.H.

FOR the past 15 years Kentucky has ranked in the bottom 10 states of the nation with its extremely high rate of new active cases; and, in 1970 Kentucky dropped to an all-time low of fourth from the bottom (from fifth in 1969); at that period the new case rate was 28/100,000 as compared to 18/100,000 for the United States. Actually Kentucky was running about 15 years behind the rest of the nation. It was about this time (1969 Legislature) that the TB Hospital Commission and the TB Control Program of the State Health Department were combined into a new division within the State Health Department which was given the responsibility for control of tuberculosis and fungal diseases.

In 1972 where does Kentucky stand and what are her accomplishments, if any? Today Kentucky ranks 7th from the bottom—Not too good, but this is probably an early reflection of the increased emphasis on INH chemoprophylaxis for the recently infected and not-yet-diseased population (recent converters).

The major objectives of this new division, in order of priority, are: 1) Prevention of disease from developing in the recently infected population (who are generally close contacts of known index cases); 2) Adequate chemotherapy for all active cases; 3) Prevention of infection of the not-yet-infected, and 4) Close surveillance of the previously treated and currently inactive cases for potential reactivation.

Today (early 1972) there are 1,224 known active cases of TB in Kentucky; only 261 of these are hospitalized; 963 are at home. Of those at home only 705 or 73% have been seen by either a nurse or a doctor in the past six months; only 665 or 69% are on chemotherapy; and only about 50% of all patients have completed an adequate course of treatment. There are currently known to be 298 active cases of tuberculosis "at home" who are not on antituberculosis drugs and who are major public health hazards; this number exceeds the total hospitalized population. These data are intolerable for such a progressive health oriented state as Kentucky.

On the bright side, let's look at the success in meeting the first objective—finding the newly infected person and chemoprophylaxis to prevent development of disease. Of 853 newly developed active cases, 7,094 contacts were identified last year (1971) or 8.4 contacts per case; 91% of these contacts were examined, 978 (14%) were found to be infected and 790 (81%) of these contacts are on chemoprophylaxis to prevent the development of disease; and 46 new active cases were found in this pool of newly infected persons. These data (1971) revealed a significant increase in performance over the preceding year (1970), is a better record than that of the United States as a whole, and is one area in which Kentucky can be justly proud. This statement is based on the fact that the risk of developing tuberculosis in the total population of Kentucky is 24/100,000 and the risk of an old tuberculin reactor developing disease is 150/100,000 but the risk of these recent converters is about 10,000/100,000/year.

Even though the average cost of an adequate follow-up (skin testing followed by clinic evaluation of all reactors) is $28.00 per contact, it must be recognized that the direct cost of a case of TB for Kentucky would average $4,740.00; therefore, this program resulted in a net savings of approximately $1,500,000.00 (money not currently available but would have been required). This is the population at greatest risk; this is the area of highest priority, and this is Kentucky's present area of greatest success.

†*This article was prepared by: H. M. Vandiviere, M.D., Director, Division of Tuberculosis Control, Kentucky State Health Department, 275 East Main Street, Frankfort, Kentucky 40601*



ANSWERS TO YOUR QUESTIONS ABOUT BLUE SHIELD

AP's "Overcharge" Story*

Recently, an article appeared in several Kentucky newspapers on physicians' "overcharges" to Blue Shield. The following is excerpted from an article which appeared in the American Medical News. It outlines the circumstances under which the information was released and also points out the misleading effect of the article, which was authored by G. C. Thelen, Jr. of the Associated Press.

WHAT'S the story behind the AP story? An AP medical-science reporter called Blue Shield headquarters in Chicago. He wanted, according to Blue Shield, to do a story on the carrier's role and responsibility in the area of cost containment. Blue Shield said it gave the reporter data that were available on utilization review and reduction of usual, customary, and reasonable charges.

Blue Shield's figures, from "ten large plans," indicated that $40 million in charges were reduced because of screens on Blue Shield norms of usual, customary, and reasonable fees—what physicians agree to as a fair fee for a procedure in their community, whether their own fees are below it or above it. The Blue Shield payment is what physicians agree to accept from the carrier, even though they do not accept it as their own customary fee in their practices.

The AP concluded—and wrote—that the amount of money billed by physicians over the Blue Shield allowable payments represented "overcharges" and that this amounted to $40 million last year.

Further, according to AP projections, "The overcharge works out to more than $500 million when the Blue Shield findings are applied to the $14 billion paid from all sources for physicians services last year."

Well, there are two things wrong with the AP's conclusions in its story.

The first is a problem of semantics. The second is a matter of abusing statistics.

Fees, voluntarily set by each physician, obviously fall both below and above an average for the community. In Blue Shield plans, MDs agree, voluntarily, to accept the average as top payment from the carrier. This they agree to do, usually as a result of contracts worked out by their local medical society and the Blue Shield plan.

The proper term for the $40 million figure cited by the AP is not "overcharge." It is "voluntary, pre-determined reduction of fees."

In fairness, the AP did include in its original story statements from both the American Medical Association and Blue Shield that pointed out why the word "overcharge" was unfair. The AP also did say, far down in the story, that only 2% of physicians are "overcharging."

As for the problem with the statistical extrapolation tried by the AP, Blue Shield points out that the $14 billion figure includes physicians in salaried practice, charges for laboratory fees, and indemnity payments under a variety of health insurance and prepaid medical programs. Therefore, a projection of the reduction on UCR programs with which the AP began is not applicable to total physician payments.

Further, the AMA said it would like to ask Blue Shield for the number of MDs who submit bills for less than they might charge and thereby save subscribers from higher premiums. There also is the large amount of free medical care provided by physicians, which represents a saving to the American public. Shouldn't these be included in any calculations such as the AP tried to do?

Our curiosity is aroused as to why the AP decided to make "news" out of a cooperative program between physicians and Blue Shield that's at least 20 years old. And why was it necessary to rush onto the wires with a story in which the only news was the interpretation that billing that includes voluntary reduction in fees for Blue Shield payment is "overcharging"?

**Excerpted from the March 13, 1972, issue of the American Medical News.*

Continuing Educational Opportunities

From The

KMA Postgraduate Medical Education Office

IN KENTUCKY

MAY

11-14 Annual meeting, Kentucky Academy of Family Practice, Lake Barkley

12-13 Third Biennial Symposium, Kentucky Obstetrical and Gynecological Society, "Cancer in Women," Stouffers Inn, Louisville

17 PANMED television series, "Intensive Care —The Need," KET 11:00 EDT (10:00 CDT)

17 Postgraduate course, "Hiatus Hernia," by Hiram C. Polk, M.D., 6:30 pm, Jewish Hospital, Louisville

17 Seminar sponsored by the Kentucky Department of Mental Health, "Alcoholism: A Contemporary Re-appraisal," Rodeway Inn Airport, Louisville

18 Seminar sponsored by the Kentucky Department of Mental Health, "Alcoholism: A Contemporary Re-appraisal," Hospitality Motor Inn, Lexington

19 Annual meeting, Kentucky Society of Internal Medicine, Continental Inn, Lexington

19-20 Workshop on Problem-Oriented Medical Record, Irving F. Kanner, M.D., Department of Medicine, University of Kentucky Medical Center, Lexington

24 PANMED television series, "Intensive Care —The Unit," KET 11:00 pm EDT (10:00 CDT)

25 Medical Malpractice Litigation Symposium, Kentucky Bar Association, 9:30 am, Executive Inn, Louisville

26-27 Spring meeting, Kentucky Surgical Society, Lake Barkley

31 PANMED television series, "Intensive Care —The Team," KET 11:00 pm EDT (10:00 CDT)

JUNE

7 PANMED television series, "Hypertension," KET 11:00 EDT (10:00 CDT)

IN SURROUNDING STATES

MAY

17-18 Postgraduate course, "Recent Advances in Abdominal Surgery," CONMED office, University of Cincinnati, Cincinnati, Ohio 45219

19 Postgraduate course, "Organic Brain Disease and Pathologic Speech," CONMED office, University of Cincinnati, Cincinnati, Ohio 45219

25 Postgraduate course, "Current Concepts in Endocrinology," CONMED office, University of Cincinnati, Cincinnati, Ohio 45219

26-27 Symposium on Community Emergency Medical Services, Astroworld Hotel, Houston, Texas

JUNE

18-22 Annual Convention, American Medical Association, San Francisco, California

JULY

16-27 Program in Human Sexuality, Indiana University, Institute for Sex Research, Bloomington, Indiana 47401



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Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia malodor of the urine, crystalluria, hematuria; appearance of live Ascaris in the mouth and nose. Hypersensitivity reactions

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addendum

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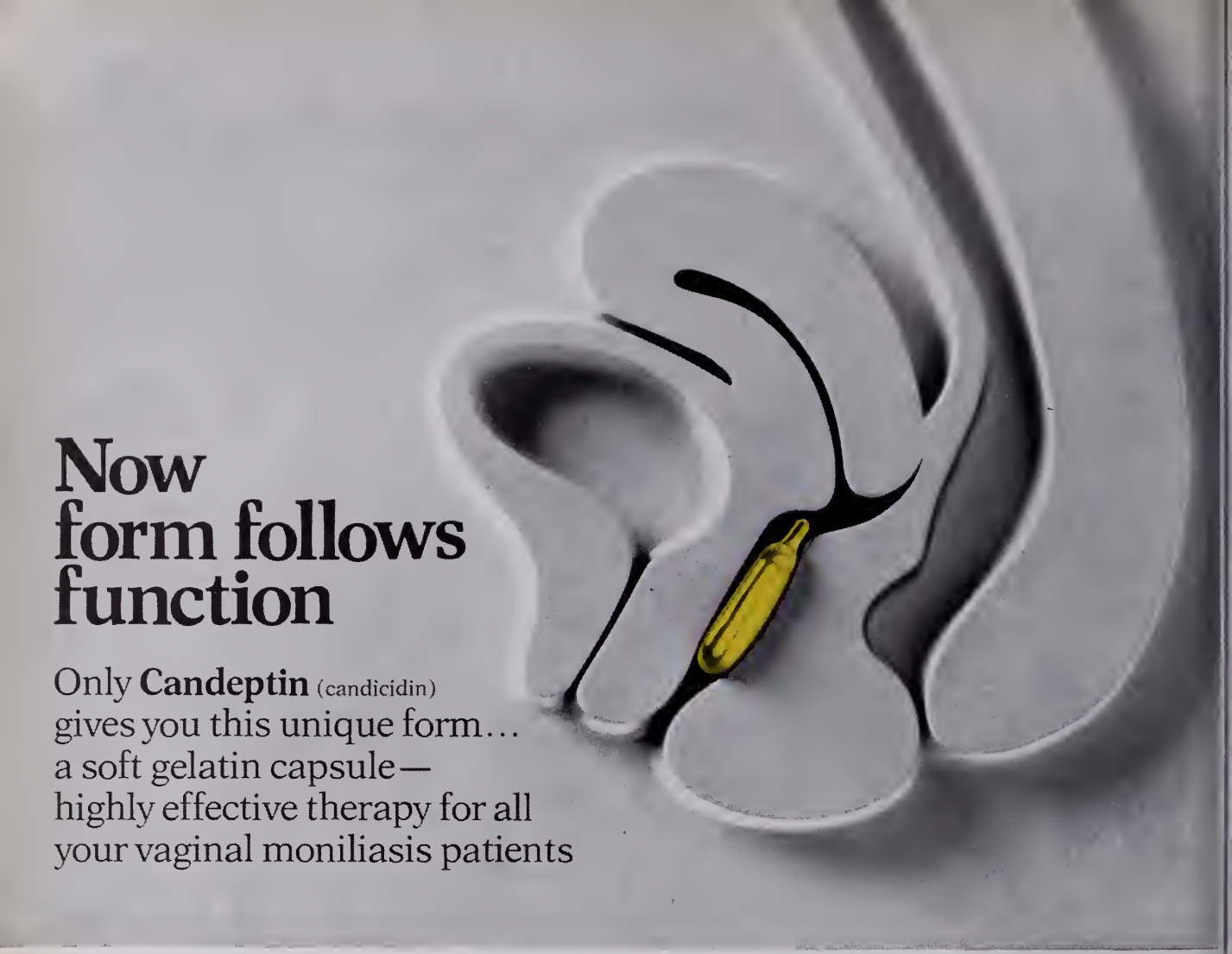
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Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses of 1 tablet/50 lb	Repeat the next day	Alternatively, a single dose of 2 tablets/50 lb may be given. However, a higher incidence of side effects should be expected.
Creeping eruption	Two doses of 1 tablet/50 lb	Repeat the next day	If active lesions are still present 2 days after completing this regimen, a second course is recommended.
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*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



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Annual Meeting

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Convention Center

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- generally good tolerance
- high solubility at average urinary pH
- rapid absorption
- rapid renal clearance
- high plasma concentrations
- economy (average cost of therapy: less than 6½¢ per tablet)

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic urinary tract infections (primarily cystitis, pyelitis, pyelonephritis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

IMPORTANT NOTE: *In vitro* sulfonamide sensitivity tests are not always reliable. The test must be carefully coordinated with bacteriologic and clinical response. When the patient is already taking sulfonamides, follow-up cultures should have aminobenzoic acid added to the culture media.

Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of antibacterial agents including the sulfonamides, especially in the treatment of chronic and recurrent urinary tract infections.

Free sulfonamide blood levels should be measured in patients receiving sulfonamides for serious infections since there may be wide variations with identical doses; 20 mg/100 ml should be maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Hypersensitivity to sulfonamides, infants less than 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis), pregnancy at term, and during the nursing period.

Warnings: Safety of sulfonamides in *pregnancy* has not been established. Sulfonamides will not eradicate group A streptococci. Deaths associated with sulfonamide administration have been reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalyses with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution when impaired renal or hepatic function, severe allergy or bronchial asthma is present. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis (frequently a dose-related reaction) may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia, methemoglobinemia. *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia, allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis, stomatitis. *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred with sulfonamide therapy. Sulfonamides bear certain chemical similarities to some goitrogens, diuretics and oral hypoglycemic agents. Goiter production, diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. Cross-sensitivity may exist with these agents.

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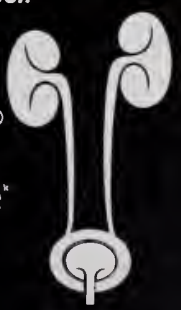
Gantrisin's rapid excretion rate is another reason why it is generally well tolerated. Over 50% of a single oral dose is excreted in 8 hours, over 90% in 24 to 48 hours, so there is little risk of hematuria or crystalluria, and anuria is rare. As with all sulfonamides, adequate fluid intake must be maintained. Complete blood counts and urinalyses, with careful microscopic examination, should be performed frequently.

For nonobstructed cystitis due to *E. coli* and other susceptible organisms

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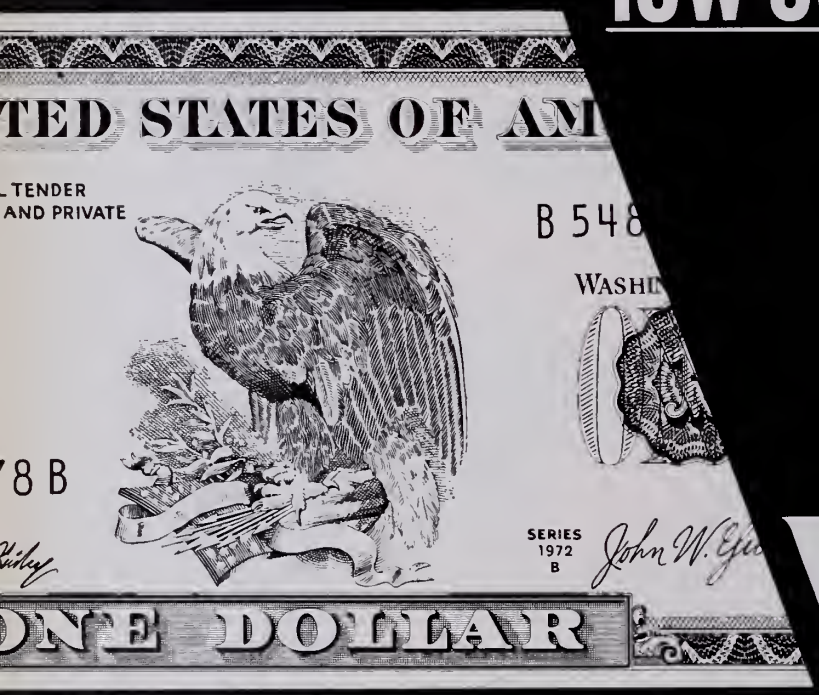
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4 to 8 tablets *stat*
2 to 4 tablets *q.i.d.*

Something new in ampicillin therapy: **low cost**



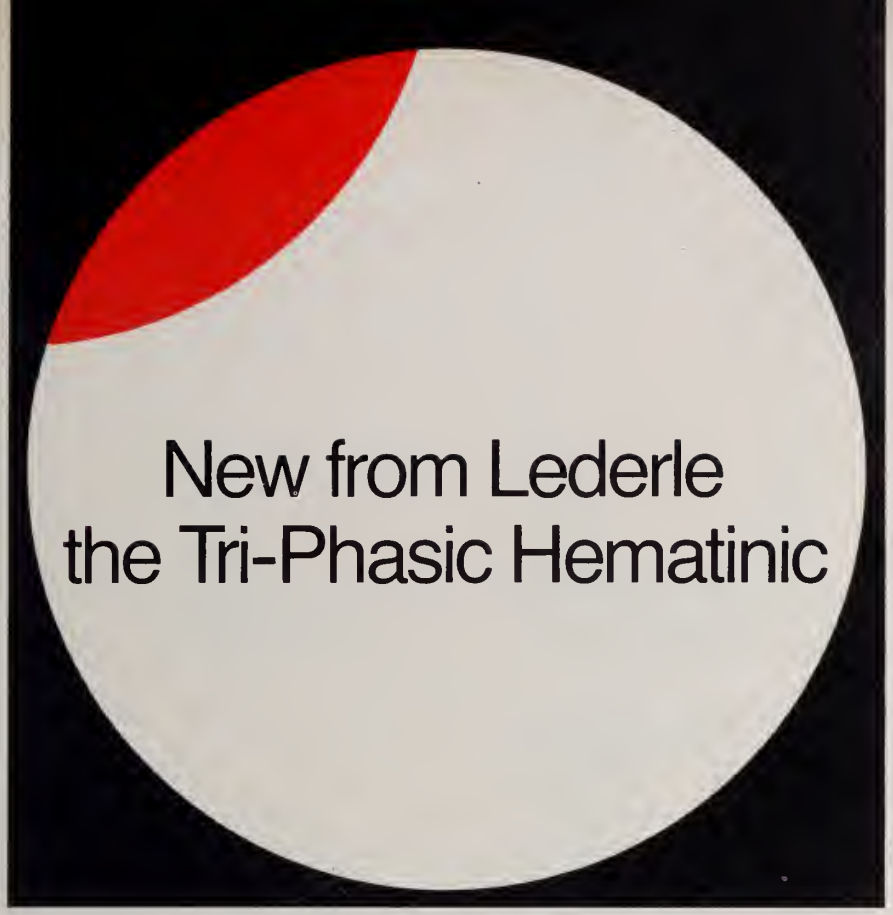
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Vitamin C (Ascorbic Acid)	600 mg.
Vitamin B_{12} (Cobalamin Concentrate, N.F.)	25 mcg.
Intrinsic Factor Concentrate	75 mg.
Folic Acid	1 mg.
Vitamin E (*d*-Alpha Tocopheryl Acid Succinate)	30 Int. Units
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Dioctyl Sodium Sulfosuccinate U.S.P.	50 mg.

Dosage: One Tablet Daily.
Available in Bottles of 30 Tablets.
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Adverse Reactions: G.I.: nausea, vomiting, diarrhea, abdominal pain. Skin rashes may occur. Such reactions may necessitate temporary or permanent changes in dosage or usage. Allergic sensitization has been reported following both oral and parenteral administration of folic acid.

TriHEMIC™ 600
HEMATINIC TABLETS

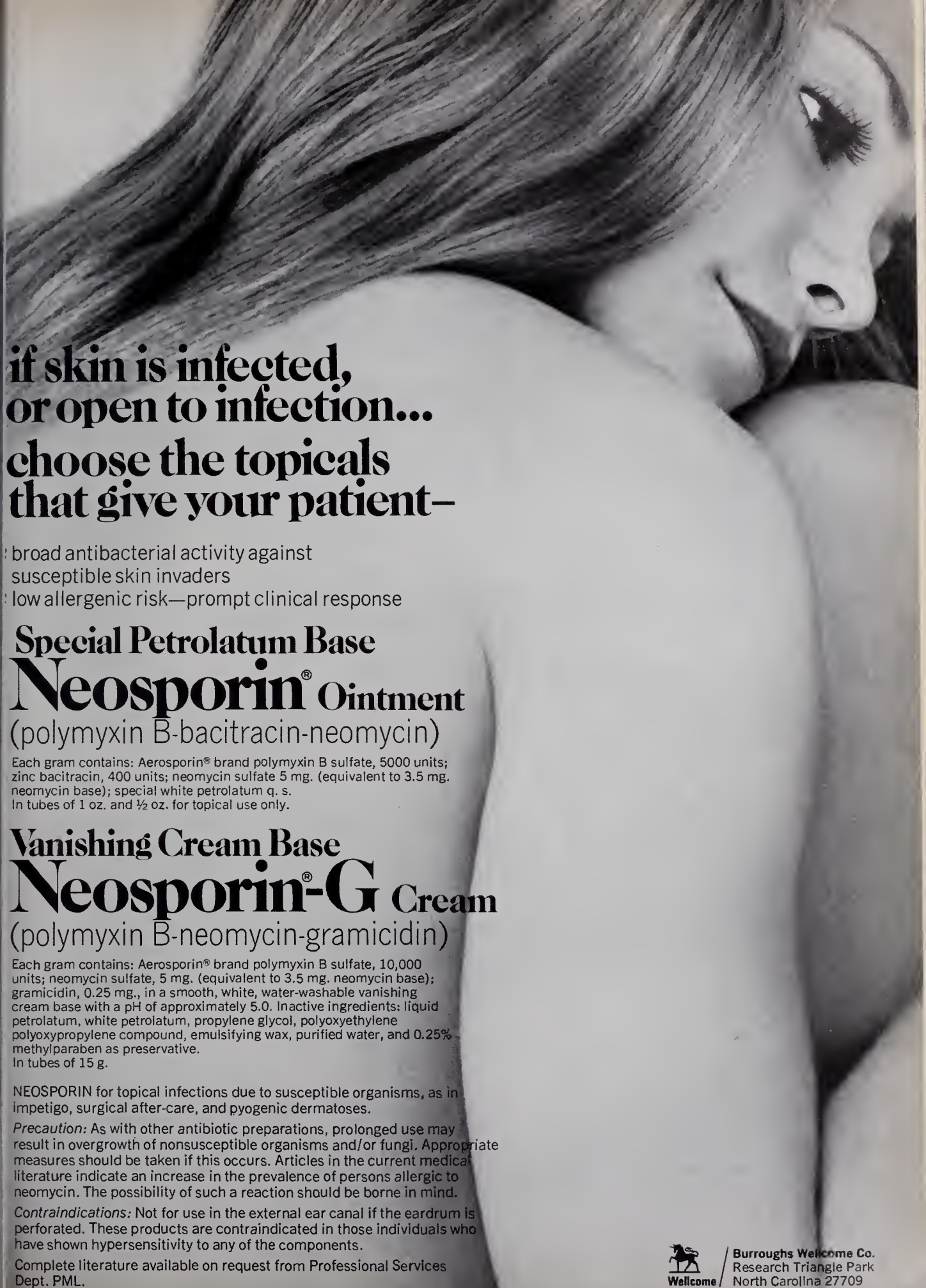
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NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

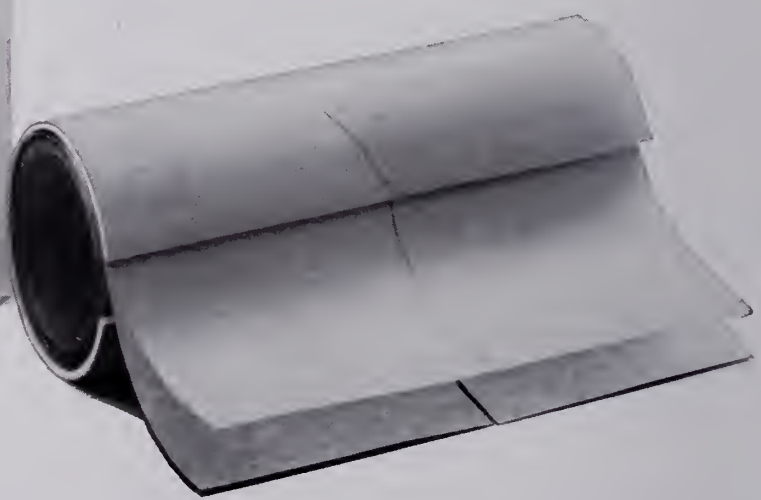
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VOLUME 70 MAY 1972 No. 5

1972 Student Research Day University of Kentucky Medical Center

THE JOURNAL is again pleased to publish the abstracts of scientific papers chosen for presentation at the Third Annual Student Research Day on January 8, 1972, at the University of Kentucky Medical Center.

The Potential Role of C-6 Substituted Pyrimidines as Chemotherapeutic Agents: A Preliminary Report

RICHARD G. BANTA

THE C-6 substituted pyrimidines have not been studied as potential chemotherapeutic agents for two primary reasons: 1) except for a few orotic acid derivatives, C-6 substituted pyrimidines have very little biological activity, and 2) the synthetic addition of a chemically active radical to the C-6 position of pyrimidines is difficult.

Since there have been several C-5 substituted pyrimidines synthesized, including 5-fluorouracil and uracil mustard, which have demonstrated various degrees of biological activity and since there are two diazo compounds, azaserine and diazo-oxo-norleucine (DON), which have been employed in chemotherapy, and since there have been no reports of the synthesis or activity of C-6 diazo substituted pyrimidines, a new compound, 3-(6-uracinyl)-1-diazo-2-propanone (UDzP) has been synthesized and confirmed. Uracil ethanoyl chloride, formed from thionyl chloride and the condensation product of citric acid and urea, was reacted with diazomethane, the unstable product of N-nitroso-B-methyl-aminoisobutyl methyl ketone and sodium isopropoxide, in a partial Arnt-Eistert reaction to form infrared, ultraviolet, and mass spectroscopy, and elemental analysis (C,H,O,N).

The investigation of the biological activity of UDzP has just recently begun and no data are available. But several theoretical generalizations about the activity of UDzP can be made. Since most diazo compounds undergo basically identical reactions, stereochemical considerations of UDzP lead one to expect it to behave similar to these compounds. With this assumption, the literature indicates that UDzP should affect various metabolic pathways including: 1) inhibition of specific processes such as the Kreb's cycle, anaerobic glycolysis, electron transport, and nuclear transcription, 2) modification of metabolism of proteins, carbohydrates, fatty acids, steroids, and nucleic acids, and 3) interruption of the biosynthesis of thyroxine and catecholamines. These concepts are presented as rationale for the continued investigation of C-6 diazo substituted pyrimidines as potential chemotherapeutic agents.

Adrenal and Thyroid Gland Blood Flow During Stress

Byron Barksdale

OUTPUT of corticosteroids from the adrenal gland is determined by the amount of adrenocorticotropic hormone (ACTH) entering them per unit time. In the normal, undisturbed animal increased input of ACTH occurs with an increase in ACTH concentration in the perfusing blood, an increased blood flow to the adrenal glands, or both.

The aim of this study was to determine whether or not increased blood flow was partially responsible for the increase in corticosteroid concentrations which occurs during ether-induced stress. For comparison thyroid flow was also estimated.

Methods: Male Wistar rats (c. 200 g) had femoral arterial and venous polyethelene catheters implanted. Two days later while conscious or ether-anesthetized, the femoral catheter was cut and in approximately 15 seconds: 1) an arterial blood sample was taken, 2) Rb^{86} was injected intravenously, and 3) ten serial, arterial samples were taken for cardiac output determination. The level of stress was assessed by determining the corticosterone concentration in the first arterial blood sample. Endocrine flow was calculated by the method of Sapirstein utilizing the cardiac output determination and the amount of Rb^{86} which each gland extracted from the blood.

Results: There was no correlation between the level of stress and the adrenal gland blood flow, but a positive correlation was found between stress and thyroid flow. A third finding was that of greatly increased cardiac outputs in unanesthetized animals as compared to anesthetized ones. This work confirms that of Goldman *et al.* A distinction between this work and theirs is that corticosterone was measured. This allowed us to observe endocrine flows in stressed and unstressed *unanesthetized* animals as well as flows in ether-stressed animals, and determine whether or not ether itself had an effect on endocrine flows in the stressed animal.

The significance of these findings as they relate to the homeostasis of a stressed animal will be discussed.

A Survey of Water Quality of the Barren River Watershed

Alvin R. Harrison, Wendell D. Lovan, Frank Osborne, Don Spencer, and Nelson Graham

THE degree of fecal contamination of water has classically been determined by measuring the total coliform (TC) concentrations (bacteria from the gut of animals, from vegetation, and from soil). Simple tests which, when applied in conjunction with the TC concentration, allow valid estimation of the actual fecal contamination, include tests for fecal coliforms (FC) and fecal streptococci (FS).

Water samples were collected weekly for four weeks at 38 sample sites in the Barren River Watershed. The TC and FC concentrations at all sample sites were greater than both the Federal and State (Kentucky) recommended maximums. The mean values for the four samplings ranged from 12,300 TC/100 ml at site 27 to 1,420,000/100 ml at site 35 and from 267 FC/100 ml at site 27 to 1,255,000 FC/100 ml at site 35 and from 18 FS/100 ml at site 27 to 608,325 FS/100 ml at site 35 (Federal recommended maximums are 1000 TC/100 ml and 200 FC/100 ml). In most cases the TC:FC ratio decreased downstream from sewage effluents indicating significant increases in purely fecal organisms. Streams which did not carry sewage effluent had very high TC:FC ratios and did not significantly alter the bacterial content of the river.

On the basis of the results, the TC, FC and FS measurements and TC:FC ratios are better indices of fecal pollution in water than the TC measurement alone, which is generally used. Further, these results indicate that gross fecal pollution is currently occurring in this area.

NBT Dye in the Differential Diagnosis of Febril Disorders

Darwin K. Edwards

THE differential diagnosis of hyperthermia as to its bacterial, viral or other disease-related origin often poses a perplexing problem. In searching for a practical rapid laboratory test, Nitroblue Tetrazolium dye (NBT) has been investigated. It has been found that when NBT dye is incubated with neutrophils, a percentage of the neutrophils will exhibit a black cytoplasmic inclusion known as a formazan deposit. The percentage of neutrophils so affected may categorize the illness as being bacterial or nonbacterial in origin. The latter category consisted of viral, granulomatous, and malignant disorders.

In this study heparinized whole blood was incubated with NBT dye for 25 minutes. Cover slip slides were made and counterstained with Wrights' stain. One hundred neutrophils were counted and the percentage of positive neutrophils was recorded.

Patients were chosen who had an oral temperature greater than 100°F during the six-hour period preceding the time the blood was drawn. In all, 37 patients were examined. Twenty patients had bacterial infections. The range of positives for this group was 31-91%, the averages being 66.7%. A second group of seven patients consisted of four viral infections; one carcinoma of the colon, one Hodgkin's disease, and one Blastomycosis. In this group the range of positives varied from 26-45%, the average being 36.1%. The third group consisted of ten afebrile clinically well individuals. Their range was 5-35%, the average being 18.9%.

The exact nature of the NBT dye reaction remains unexplained. Speculation holds that the reaction involves the combination of the dye with an enzyme system, the activation of which, is directly related to phagocytosis.

The results of this study indicate that the NBT dye reaction is both practical and useful in categorizing the etiology of hyperthermia.

The Importance of Glycolysis as an Energy Source in Phagocytosis

J. L. Johnson

A study of lactate dehydrogenase (LDH) in rat alveolar macrophages has been used to estimate the importance of glycolysis as an energy source in the phagocytic process. Rat alveolar macrophages were collected by saline lavage from pentobarbital anesthetized animals, the cells harvested by washing and centrifugation, and the enzymes liberated by sonication and homogenization. Enzyme separations were performed electrophoretically and assayed enzymatically. A single LDH isoenzyme (M_4) is visualized by this procedure whereas the usual five electrophoretically separable multiple forms are found in lung tissue treated similarly. Kinetic studies on the M_4 LDH isoenzyme indicate that it has, as does the M_4 isoenzyme isolated from other tissues with high glycolytic activity, a high affinity for pyruvate as electron acceptor and is thus very effective in reoxidizing NADH with pyruvate to form lactate. Oxamic acid, a potent inhibitor of glycolysis as well as of phagocytic activity, also inhibits the M_4 LDH isoenzyme of rat alveolar macrophages and exhibits competitive inhibition with pyruvate as substrate. Both the mitochondrial and supernatant malate dehydrogenases can be visualized electrophoretically in rat alveolar macrophages but virtually no NADPH specific glucose-6-phosphate dehydrogenase is present.

These experiments indicate that glycolysis plays a much greater role as an energy source in normal rat alveolar macrophage metabolism than previously thought, although aerobic (respiratory) activity is certainly present. The hexose monophosphate shunt appears to contribute little, if any, to the overall energetics.

Satellite Renal Dialysis Feasibility Study

Richard Bienia, Allen Cornish, and James Lett

KIDNEY disease is currently the fourth leading cause of death in the United States. Each year about 750 persons living in the area served by the University of Kentucky Medical Center die from it. However, only 29 of these end stage patients are currently receiving treatment. The situation is made particularly tragic by the fact that for many of these patients the disease is curable by renal dialysis and kidney transplant. The major obstacle to treatment is financial. It costs $14,000 a year to maintain a patient on dialysis and $15,000 to perform a transplant operation.

To make transplant and dialysis service more available and less expensive, we investigated the feasibility of installing small, two-machine dialysis facilities in local community hospitals. These facilities would operate in close cooperation with the University Medical Center and would serve to hold patients on dialysis until a kidney became available at the University for transplant. Such a facility could be supervised by family physicians on an emergency call basis and would provide a greater base of patients among which to find an acceptable match when a kidney became available. Local facilities would also eliminate the need for a patient to move to Lexington during the 6-12 month time it takes to find an appropriately matched kidney.

The details of the project involved the investigation of 13 selected hospitals including interviews with administrators and community physicians in an effort to determine if it would be feasible to install a facility there. The feasibility criteria consisted of such items as physician and administrator interest, hospital space, laboratory facilities, and financial support available for a dialysis unit.

If sufficient financial support could be obtained, our study showed that in five of the 13 hospitals studied the establishment of a dialysis facility was clearly feasible and an excellent means of managing the patients. However, if only relatively young patients with no complicating medical problems were accepted for transplant, dialysis facilities would still be needed for 250 patients. Twenty-nine patients are being treated now, so to cover the remainder, satellite dialysis units would have to be established in 20-30 additional hospitals. Clearly this would require a heroic effort in terms of organization, money and time. We feel, therefore, that a more substantial and practical contribution would be made if the operating staff of presently existing dialysis facilities were increased with the idea of operating them on a three shift, seven days a week basis. To ease the burden on hospital staff and reduce expense to the patient, consideration would also be given to allowing patients' families to operate the machines on a self-service basis. Operated in this manner, the 29 presently available machines could provide service for almost 150 patients. This idea is made particularly attractive by a flow analysis we conducted which showed that if the number of successful transplant operations can be increased from the present 30 to 50 a year then dialysis facilities would be needed for only 150 instead of 250 patients. This number could be handled entirely by existing facilities.

Evaluation of Diethylnitrosamine as a Carcinogen and Chromosome-Breaker

John Douglas Knoop

NITROSAMINES are carcinogens which may be formed in the acid pH of the stomach from nitrites used as food preservatives and secondary amines formed during the cooking of foods.

A correlation between chromosome breakage induced by polycyclic hydrocarbons and mammary carcinomas in rats has previously been shown, demonstrating the validity of using the frequency of breaks as an index of carcinogenicity for at least one group of chemicals. This may provide a useful way for

assessing the potential carcinogenicity of other compounds, such as the nitrosamines.

Diethylnitrosamine (DENA) was administered to rats via tail vein injection in a lipid emulsion. Dosage tolerance levels (LD-50) for rats were determined by administering doses from 150 to 750 mg DENA/kg body weight. Probit analysis indicated the LD-50 to be 457±75 mg/kg. After tolerance levels were established, rats were injected with 150-450 mg DENA/kg doses, and sacrificed 24 hours later. Metaphase chromosome spreads were prepared and examined for numbers of chromosomes and the incidence of gaps and breaks.

The incidence of aberrations induced with DENA is low compared to the potent chromosome-breaker and carcinogen dimethylbenzanthracene. Analysis by a binomial method of the breaks and gaps on the individual chromosomes indicated that the distribution of these lesions was non-random. There was an excess of breaks on the S3 and S5 chromosomes, and an excess of gaps on the S1, T, and M chromosomes.

A long-term study has been initiated to determine whether the induction of cancers in rats can be correlated with the observed chromosomal aberrations induced with DENA. Thirty rats of two strains were given DENA (150 mg/kg) every ten days. After more than two months of injections, no neoplasms have been observed. A low incidence of cancer development would be in agreement with the low incidence of chromosome aberrations induced with DENA.

Characterization of RNA Polymerase in Glial Nuclei

Bobby C. Powell and D. E. Slagel

THE study of RNA synthesis and its control has not been extensively studied in the cells of the central nervous system. The study of RNA synthesis in glial cells is of particular importance because of their malignant transformation into brain tumors.

Nuclei isolated from sheep centrum semiovale were used to characterize nuclear RNA polymerase activity in oligodendroglial cells with respect to $(NH_4)_2SO_4$ activation, pH maximum, optimum incubation time, presence of nucleases, and the relative activities of RNA polymerases I, II and III as determined by specific inhibitors. Nuclei were isolated from sheep brain by homogenization; centrifugation in 0.32M buffered sucrose and purified by centrifugation through 2.39M buffered sucrose. The nuclear pellet was suspended in an assay buffer having the following composition in mM/ml: tris-HCl 0.1, sucrose 0.24, $MgCl_2$ 0.008, KCl 0.07, NTP's (UTP, CTP & ATP) 0.1, phosphoenolpyruvate 1.6, pyruvate kinase 9.2 enzyme units, $(NH_4)_2SO_4$ 0.2, and labelled NTP (usually H^3-GTP) 2.5 uc. The assay suspension was incubated at 37°C for 15 minutes and the reaction stopped by precipitation with 10% TCA. The precipitate was washed, solubilized, and counted in a Packard scintillation spectrophotometer 3375 at a H^3 counting efficiency of 46%. Ammonium sulfate activation of the nuclear RNA polymerase in a series of experiments showed peak stimulation occurred at 0.2M concentration. At this concentration the percent stimulation was 537% of the control activity with no ammonium sulfate. Optimum pH occurred with a broad maximum of pH 7.8. Reaction kinetics gave a biphasic curve having a steep slope from 0 to 20 minutes. The reaction continued at a somewhat decreased rate to 60 minutes. The presence of nucleases in the reaction mixture could not be detected by an actinomycin experiment designed to measure nuclease degradation of newly synthesized RNA. A series of experiments were carried out using cycloheximide, amanitin and rifampin which specifically inhibit RNA polymerases I, II and III respectively. The results of these experiments showed that RNA polymerase II which is probably related to mRNA synthesis accounted for approximately 80% of the total activity. (This research was supported by grants from the American Cancer Society, Kentucky Division and NB 05771 and MH 06039. from N.I.H.)

A Theoretically Derived Educational Program for Controlling The TB Patient's Compliance with Chemotherapy

Edward Squire and Benjamin Kutnicki

THE tuberculous patient needs medicine to recover, but often may not take it. (Moulding, 1971) Indeed non-compliance ranks as the most common cause of treatment failure. (Stead, 1969) Patient ignorance and attitude both may contribute to the problem. (Vandiviere, 1970) The result of non-compliance may be relapse, disease spread, or drug resistant infection. (Stead, 1969,71) An increasing trend toward ambulatory treatment intensifies the need to enlist patient cooperation. (Stead, 1970)

This study asks: "Will controlled education elicit prescribed health behavior?" Reported are the immediate effects of instruction on patient knowledge and attitude about TB. Future data, however, will cover clinic attendance, disease progress, and pill taking. Thus, one may answer the question: "Has education improved compliance?"

Experimental Procedures

A test educational program had to be developed and evaluated. The first step was development of instruction which utilized two theoretical constructs: the Rosenstock Model of preventive health behavior and Festinger's Cognitive Dissonance Theory. Lesson plans with behavioral objectives applied these theories to instruction. Hospital personnel taught using "Teaching Aids in Tuberculosis" developed by William Stead, M.D. Instruction consisted of three lecture-conference style lessons, approximately one hour each.

The second step was evaluation. Patients in Kentucky's State TB Sanatoria capable of being interviewed participated. They were assigned by a stratified random sampling technique to three groups designated Control (C), Nutrition-Instruction, (N-I), and Tuberculosis-Instruction, (TB-I). The C Group received no instruction; N-I, instruction in nutrition, unrelated to TB; and TB-I, experimental education about TB. Pre-tests measured initial knowledge and attitude about TB; post-test measured changes.

Results and Conclusion

Results are of two types: knowledge data and attitude data. The TB-I Group's changes from pre- to post-tests were evaluated and compared with control groups. Mean knowledge test scores showed an increase—significant by t-test at the .001 level. Chi-square analysis of changes in attitude response to the question, "Do you believe you have TB?" showed significant change at the .05 level.

Thus, the TB-I Group showed significant increased knowledge and attitude change. The data demonstrate that hospital personnel, given the tools and techniques, can "educate" patients. How much instruction influences patient behavior needs further evaluation. Therefore, follow-up data will assess patient compliance.

Genesis of Fat Embolism Syndrome

T. S. Moore and D. W. Victor, Jr.

IN a continuing attempt to develop an animal model of fat embolism syndrome (FES), 12 adult mongrel dogs were divided into two groups: Group I (6 dogs)—bilateral femoral fracture repaired with intramedullary rod and transfusion and Group II (6 dogs)—bilateral femoral fracture repaired with intramedullary rod, hemorrhage, and transfusion. Blood gases, ACT, serum triglycerides, platelet counts, lung biopsies, blood pressure, and respiratory rate were followed after trauma.

All dogs showed fat emboli. No significant differences were found in the various parameters between the two groups, although group II dogs had generally lower pO_2 and higher respiratory rates. This was accompanied by

increased fat emboli as time went on as shown by the lung biopsies. Perhaps one other insult might produce the full-blown FES, and an animal model will be available.

More important, the progressive increase in fat emboli from zero time to 72 hours may give a clue to the genesis of FES. This phenomenon suggests a continuing embolization process rather than mere embolization at the time of trauma. This progressive occurrence may be due either to: 1) increased lipid mobilization or 2) decreased clearance of fat. Either explanation implies defective lipid metabolism which may be secondary to trauma-induced blood abnormalities.

Immunogenic Enhancement by Neuraminidase

Stephen Oxley

NEURAMINIDASE splits glycosidic linkages between sialic acid and mucopolysaccharides. This activity, occurring at cell membranes, alters the antigenic properties of living cells. The question asked in this study is: Does neuraminidase treatment of killed cells alter their antigenic capability?

Sixty $C57^{B1}$ mice without tumor were divided into three equal groups. Cells harvested from a spontaneous, transplantable mammary adenocarcinoma were treated with 100% lethal irradiation. The 20 ml of cells were divided into 10 ml aliquots, and one aliquot incubated for 30 minutes at 37°C with 500 units of neuraminidase. The other aliquot was not treated with neuraminidase. Group I (20 mice) received 0.3 ml of treated cell suspension subcutaneously on two separate occasions four days apart. Group II (20 mice) received similar immunization with untreated cells. Group III (20 mice) served as control. All mice were then challenged with 0.5 ml of living mammary adenocarcinoma cells given subcutaneously at three days after the last immunizing dose of killed cells. They were followed for tumor appearance, growth rate and percentage take.

INCIDENCE OF MAMMARY ADENOCARCINOMA IN $C57^{Bl}$ MICE

	% with Palpable Tumor		
DAY	G-I	G-II	G-III
7	0	0	0
8*	0	60	25
9*	15	95	60
10*	40	100 (max)	80
11	60	100	95 (max)

*Differences in tumor incidence significant to $P<0.001$ by Chi-square test.

There were no tumor nodules at site of injections of killed cells. Neuraminidase-treated *killed* tumor cells have increased antigenic capabilities.

Forensic Aspects of Transfusion Reactions

LTC Frank R. Camp, Jr., MSC,* Robert M. Nalbandian, M.D.,** Col Nicholas F. Conte, M.D.,*** and Frank R. Ellis, M.D.****

Fort Knox, Kentucky

Three areas of legal importance concerning blood transfusion reactions are defined with suggested guidelines for their prevention. Special forms, useful in litigation procedures, are described for continuous documentation by pathologists and the hospital staff.

THREE MAJOR areas may confront the forensic pathologist in his special role on the Hospital Transfusion Board.

1. Patient and sample identification.
2. Prevention, detection, and management of Incompatible Hemolytic Blood Transfusion Disease (IHBTD).
3. Documentation in the form of a Blood Transfusion Reaction Report.

Since a clerical or administrative error rather than a technical one (blood collection, blood processing) is responsible for most of the serious transfusion accidents, it is apparent that better organization of the Blood Transfusion Service should be a matter for consideration. Advances in immunohematology since 1940 notwithstanding, the *system* in use by hospitals in providing blood therapy to patients leaves much to be desired. This implies that a system for such a service actually existed. Herein lies the problem.

The first effective contribution to the problem of preventing injury from blood transfusion therapy appeared in 1962 when Doctor William H. Crosby called attention to the urgent requirement for Hospital Transfusion Boards which would be responsible for coordinating blood transfusion practices within their medical facilities[1].

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This was followed by a recommendation for the strategic location of mannitol on various wards and stations throughout the hospital with specific directions for its immediate use[2-4].

The next advance came when a cross-check technic was proposed rather than a recheck procedure in determining, by laboratory analysis, whether or not a hemolytic transfusion reaction had occurred[4].

Finally, recent articles have proposed a total system including a set of instructions for each member of a professional team: nurse, physician, anesthesiologist, and medical technologist[5-8].

Current Situation

We have provided, in brief, a description of the problems and progress occurring in the area of blood grouping, blood banking, and blood transfusion. The present "state of the art" with respect to safety of blood transfusion therapy concerns not only the forensic pathologist, but the entire hospital staff (administrative and professional), the patient, the patient's family or next of kin, and finally the legal profession which is uniquely concerned with injury and/or death resulting from transfusion reactions.

There are statutes and cases which have established several guidelines for all individuals concerned. Professor Charles H. Randall, Jr., has prepared an excellent review entitled "Medicolegal Problems in Blood Transfusion" for the American Association of Blood Banks[9].

His monograph covers the following in detail:

I. The Doctrine of Charitable Immunity.
II. Theories of Absolute Liability.
III. Claims Based on Negligence.

We will review only several of the more pertinent areas that directly concern our presentation.

With respect to our first criterion—patient

and sample identification—the transfusion of of the wrong person comes under the category of "Theories of Absolute Liability," and more specifically, under "Assault and Battery." The use of wristlet identification bands bearing the patient's full and correct name alleviates some, but by no means all, of the problem. Patient and sample identification remain the leading problems in laboratory medicine. Efforts are under way to resolve the problem by means of electronics and automated systems of identification, analysis, readout, and print out of test results.

One of the most difficult situations facing us today is related to Professor Randall's classification III: Claims Based on Negligence. Proof of negligence in which the doctrine of *res ipsa loquitur* ("the thing speaks for itself") is invoked is described by Professor Randall as "a procedural device which aids a claimant in presenting his case before a jury, without the necessity for proving the specific acts of negligence. No court has yet held that mere occurrence of a hemolytic reaction, by itself, gives rise to an inference of negligence. We may expect that transfusion of the wrong type blood to a patient will be held to constitute negligence or give rise to an inference of negligence." Some courts reach the same result without recourse to *res ipsa loquitur*. Such a court might hold that transfusing a patient whose blood type is O with type B blood was circumstantial evidence of negligence. We may expect increasing application of *res ipsa loquitur* to blood transfusion cases, particularly in cases involving hemolytic reaction.

It is important to know that transfusion of incompatible Rh positive blood to a sensitized Rh negative patient is *prima facie* evidence of negligence.

Our basic criteria II and III (Prevention, detection, and management of IHBTD and Documentation in a Blood Transfusion Reaction Report) are shown to have pertinence under "Probable Negligence—Transfusion with Incompatible Blood." "Most actions concerned with injury or death resulting from blood transfusions are brought on a theory of negligence. The problem of causation is often crucial in such cases.[11] Determination of causation is aided by appropriate tests conducted after the transfusion has been discontinued, following an apparent transfusion reaction."[9] We must add to Professor Randall's statement the requirement of documenting, with appropriate tests, not only whether or not a hemolytic reaction has occurred, but all other pertinent events in a Blood Transfusion Reaction Report.

Special Considerations

A Blood Transfusion Reaction (BTR), excluding late sequelae, may be defined as any adverse clinical sign or symptom occurring singly or in combinations during or shortly

Table I

MANAGEMENT OF TRANSFUSION REACTIONS

Findings	Treatment
Urticaria only	Intramuscular antihistamines, resume transfusion if controlled
Fever, chills, etc. 1. Examine patient's blood for: intravascular hemolysis (plasma hgb.) extravascular hemolysis (Coombs test) 2. Examine donor plasma for bacteria	1. Stop transfusion 2. If laboratory tests are negative treat with antipyretics and sedatives. With positive findings start prophylactic treatment as below
Shock, hemoglobinuria, oliguria, bleeding	1. Maintain blood pressure with vasopressor 2. Maintain urine flow over 100 ml./hr. a. Mannitol 25 grams intravenously b. Fluids 3. Replace specific deficits when indicated a. Fresh plasma, platelet-rich b. Fresh frozen plasma c. Fresh whole blood, if necessary 4. Antibiotics and hydrocortisone for septic shock

Mannitol Infusion Treatment For Potentially Lethal Hemolytic Transfusion Reactions

DIRECTIONS AND PROCEDURE OF MANNITOL TREATMENT*

Infuse intravenously 100 cc of 20% mannitol solution within a 15-minute period. This solution is available in 250 ml bottles at all nursing stations, including this one. This dose will initiate a diuresis of 1 to 3 ml of urine per minute in an adequately hydrated patient. The same dose may be repeated if urine flow drops below 100 ml per hour for any subsequent two hour period. Mannitol may be discontinued when the patient can maintain a urine flow of 100 ml per hour without its use. If diuresis does not occur, acute tubular necrosis may be presumed to exist and appropriate and immediate treatment for that condition is indicated.

COMMENT

Time is of critical importance in treating incompatible hemolytic transfusion reactions. The degree of injury sustained by a patient is proportional to the time interval between the offending transfusion and the onset of mannitol treatment. Therefore, the sooner mannitol is administered the less severe is the injury.

If the history, physical findings and clinical course are such that a hemolytic transfusion reaction is suspected as highly probable, mannitol infusion should be started even prior to or concurrent with laboratory investigation, since under the conditions of use prescribed above, no direct adverse sequelae from the use of mannitol will occur. The gain increment of time difference in the interval between the use of mannitol and the laboratory determinations accrues to the advantage of the patient.

TABLE II These explicit instructions for the use of mannitol are instantly available to the physician as is mannitol itself at each hospital station where blood transfusions are administered.

*From: Postgraduate Medicine 45: 84-89, 1969, based upon Barry, K. G. and Crosby, W. H.: Transfusion 3: 34-36, 1963.

after a blood or blood component transfusion and the result of that transfusion. A summary of BTR's of several types is included in this report. Potentially catastrophic is the Incompatible Hemolytic Blood Transfusion Disease (IHBTD) which is defined as that condition incident to a blood transfusion in which intravascular hemolysis of sensitized erythrocytes is so accelerated as to portend a possible fatality. The method of Doctor Paul J. Schmidt,[3] shown in Table I summarizes the findings and treatment of transfusion reactions.

Principles of Diagnosis

In analyzing data, it is infinitely preferable to confirm results by methods other than those used initially. Thus, in investigating a possible IHBTD, one must use methods other than those by which compatibility of the donor and recipient blood was originally determined. Under these circumstances rapid cross-checking of the parameters of pathophysiology in the patient is needed, rather than the traditional, time-consuming recheck of the entire typing and crossmatching procedure which may merely perpetuate original technical errors. In cross-check of a BTR, attention is directed only to those parameters of pathophysiology[12] which would be diagnostically altered if IHBTD were present. The two diagnostic parameters which also function selectively as early indices of severity are elevated plasma hemoglobin levels and positive direct Coombs test when compared with pre-transfusion specimens.

Several papers[13-16] have emphasized the aspect of consumption coagulopathy in association with IHBTD. It is essential to investigate for consumption coagulopathy once IHBTD has been diagnosed.

It is prudent to do a gram stain on a centrifuged aliquot of plasma from the transfused unit to detect the rare case in which the transfusion reaction may be due to gross bacterial contamination of the unit of blood.

The two determinations crucial to the diagnosis of IHBTD, however, are the demonstration of elevated plasma hemoglobin levels and positive direct Coombs tests when compared with pre-transfusion specimens.

Principles of Therapy

Since 1953, a growing body of both evidence and opinion has supported the use of

mannitol treatment in IHBTD.[2, 3, 11, 17] On the other hand, universal adoption of this therapy for IHBTD is not evident.

There is a point in time beyond which mannitol becomes progressively less effective. Thus, the interval between the offending transfusion and the initiation of mannitol therapy should be as short as possible. We recommend the classification of mannitol as an emergency drug and urge that it be stocked at all hospital stations where blood transfusions are given. At each station explicit directions for the intravenous use of mannitol should be posted (Table II). It is important to emphasize compliance with these measures; any oversight will increase the interval between transfusion and treatment, to the patient's detriment. Time saved in our proposed cross-check detection procedure and early recourse to mannitol therapy benefits the jeopardized patient, since effective treatment can be given much earlier.

When IHBTD has been diagnosed, it follows that mannitol therapy must be instituted and diagnostic procedures for a consumption coagulopathy carried out. If a significant coagulopathy is present, appropriate therapy is also added to the regimen. Probably in every case, and in variable degree, IHBTD is accompanied by a consumption coagulopathy. Because IHBTD may be superimposed on any number of very different underlying diseases, appropriate coagulation studies should be done to determine whether the coagulopathy is: (1) primary activation of the coagulation system with a secondary fibrinolytic component; (2) primary activation of the fibrinolytic system; or (3) coequal activation of both systems. Since treatment is quite different for each type of coagulopathy and fraught with disaster if treatment regimens are interchanged, the coagulopathy must be categorized. Continuous, intravenous heparin is the indicated treatment for category 1; epsilon amino caproic acid for category 2; and heparin with or without epsilon amino caproic acid is acceptable for category 3, since Trasylol is no longer available by FDA edict.

The clinician should consult with the pathologist to obtain a profile of diagnostic and base line coagulation studies. In consumption coagulopathy the basic pathophysiology is the intravascular conversion of plasma to serum. The central therapeutic principle is the titration of the patient by intravenous, indicated drug to revert the serum back to plasma as guided by the response of individual parameters in a periodically repeated coagulation profile.

Because at present there are many different coagulation tests from among which pathologists may exercise personal preferences for the diagnosis of consumption coagulopathy, the profile of tests of coagulation parameters for diagnosis and for monitoring therapy is best left to the individual pathologist.

FIGURE 1a

CLINICAL DIAGNOSIS_____
HOSPITAL BLOOD UNIT NO._____ AMT. OF BLOOD REC'D BY PATIENT_____ml

ATTENTION!

1. STOP transfusion immediately, leave needle in vein with slow saline drip.
2. SUMMON any available PHYSICIAN immediately.
3. Check for agreement all identifying names, numbers, and letters on pilot tubes, transfusion unit, and patient's wrist tag.
4. Record pre- and post-transfusion temperatures.
5. Obtain an immediate post-transfusion urine specimen and a second post-transfusion urine specimen 4 hours later. Forward properly labeled specimens to laboratory.
6. Request physician to complete form on back marked: "Clinical Manifestations."
7. Send entire blood unit with this completed form to Blood Bank.

Direct Coombs test_____

Serum Free Hb_____

Reaction: YES_____ NO_____

Mannitol started_____hr., date.

Implementation of the Cross-Check Principle

We now turn to the implementation of the principles of diagnosis and management of BTR and particularly IHBTD as discussed above. By segregating and separately specifying the duties and responsibilities of each member of the blood transfusion reaction investigative team (nurse, clinician, medical technologist, and pathologist), it has been

PHYSICIAN ONLY COMPLETE THIS SECTION

CLINICAL MANIFESTATIONS ( )

Chill, Sensation _____

Severe Shaking Chill _____

Severe Low Back Pain _____

Pulmonary Infarct _____

Nausea _____ Arthralgia _____

Hives _____ Headache _____

Angina _____ Skin Changes _____

G. I. Hemorr. _____ Dyspnea _____

Perspiration _____ Oozing From Wound or Venipuncture _____

	Pre-Reaction	Reaction	Post Reaction
Date			
Time	(Blood Started)		(Blood Stopped)
Temp.			
Blood Pressure			
Pulse Rate			

FIGURE 1b This report serves as a summary record of the salient clinical features as observed by the clinician at the time of the event. It routes and accompanies appropriate specimens to the laboratory. Data from the Coombs tests, the plasma hemoglobin tests, and the Gram stain are recorded thereon.

possible to coordinate the *delegated activities* of several individuals located at various points in the hospital in order to detect early and salvage effectively victims of IHBTD. The mode of handling and recording the generated clinical and laboratory data on the Blood Transfusion Reaction Report form [Figure 1 (a-d)] provides a document which to a great extent protects the physician and the hospital from the hazards of litigation.

Conclusions

We believe that the proper role of the pathologist is one of consultation in the circumstance of a BTR. A patient with the manifestations of one or more of the several types of BTR has acquired an additional potentially lethal complication superimposed on the underlying medical problem which must be diagnosed and treated in that clinical context by a clinician. The clinician must be supported by pertinent laboratory data and by consultations with the pathologist.

A diligent perusal of the figures and sets of instructions* clearly demonstrates that this procedure system achieves multiple ends with maximum efficiency. While each member of the investigating team receives only his role-specific instructions, the composite result of the four different sets of instructions coordinates the several independent efforts to the extent that:

1. A BTR emergency (always a possible IHBTD) is recognized by the nurse who stops the transfusion and summons a physician. She then follows the seven instructions listed on the Blood Transfusion Reaction Report (Figure 1).

2. The type of BTR is diagnosed and treated by the clinician with the benefit of instructions predicated on the cross-check principle. Life-threatening emergencies can be dealt with effectively because specific instructions and drugs are at hand.

3. There is created an historical record, the Blood Transfusion Reaction Report, which characterizes and summarizes the particular episode, and provides the hospital and involved physicians with documentary evidence in the event litigation occurs.

4. Rechecking (retyping and recrossmatching) is done after the life-threatening possibility of IHBTD has been appropriately treated.

Summary

A description of the problems and progress occurring in the realm of blood grouping, blood banking, and blood transfusion since 1940 is presented.

Three areas of legal importance concerning transfusion reactions are defined.

1. Patient and sample identification.

2. Prevention, detection, and management of IHBTD.

3. Document of tests results and events in a Blood Transfusion Reaction Report.

Contained in a booklet which may be obtained from the Blood Transfusion Division, US Army Medical Research Laboratory, Fort Knox, Kentucky 40121, ATTN: LTC Frank R. Camp, Jr.

LABORATORY USE ONLY

IDENTIFICATION DATA CORRECT? YES NO

Time Rec'd _____ Technician _____ Date _____

RE-CHECK OF TYPING

	Coombs		Cell Typing						Serum Typing			
	Direct	Indirect	A	B	A,B	Rh_o	R^{h_o}	rh'	A_1	A_2	B	O
Patient's Pre-reaction Blood Sample												
Patient's Post-reaction Blood Sample												
Pilot Tube - 1												
Pilot Tube - 2												
Donor Blood From Container												

RE-CHECK OF CROSSMATCHES

	Saline	Coombs	Albumin	Immune Antibody: Anti- _____			
				Titer	Day-Rx.	Day - 1	Day - 2
Patient's Pre-reaction Serum Sample							
Patient's Post-reaction Serum Sample							

BACTERIOLOGICAL STUDIES: _____ GRAM STAIN: _____ CULTURE: _____

BLOOD TESTS

	Pre-react	Day of React	Day - 1	Day - 2	Day - 3	Day - 4	Day - 5
Hemoglobin							
Hematocrit							
Retic. Count							
Serum/Plasma hemoglobin							
Bilirubin							
Methemalbumin							
Serum Haptoglobin							
URINE TESTS							
Free Hemoglo. (Quantitative)							
Free RBC							
RBC Casts							
Bile							
Albumin							
Daily Output							
Spec. Grav.							

FIGURE 1c If any clinical manifestations are abnormal, the report is routed directly to the pathologist who may use it as a checklist for following the pertinent parameters in the jeopardized patient and for monitoring the response to therapy.

Specific legal statutes and cases have resulted in the establishment of guidelines for blood banks. These guidelines, compiled by Professor Charles H. Randall, Jr., have been interrelated to main problem areas. A Blood Transfusion Reaction Report form is described as essential to the Hospital Transfusion Board, the Blood Bank Pathologist and laboratory staff, and other hospital departments and staff such as surgery, anesthesiology, and nursing.

CONSUMPTION COAGULOPATHY DATA

COMMENTS/CONCLUSIONS

MD

FIGURE 1d The plain, reverse page of this report can be used to record coagulation studies. The last and final function is an orderly summary record of the episode in sufficient detail to dissuade legal harassment.

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A Cancer Challenge—The Will to Conquer

A Case Report

Wilk O. West, M. D.*

Lexington, Kentucky

Presented is the history of a valiant woman from Somerset, Kentucky. She has had four histologically different cancers since 1963. The poem herein should serve as a model for all of us who treat malignant disease, and might in some small way give encouragement and hope to both physician and patient.

I was asked to see Mrs. Katherine T. Hines for an oncology consultation, January 7, 1970. It is of unusual and great interest that this woman has had a total of four separate histologically different malignancies spanning a period of seven years.

Her history goes back to 1964 at which time she had radiation therapy followed by hysterectomy because of adenocarcinoma of the endometrium.

In August, 1969, she had an adenocarcinoma removed from the transverse colon. At the time of surgery a solitary nodule was noted on the inferior margin of the infracardiac diaphragm. Eight regional nodes were removed and were histologically negative for tumor.

When examined in January, 1970, there was an area suggesting a recurrence in the upper abdominal incision. Since this was equivocal and her liver scan was normal, she was treated symptomatically. In May, 1970, it was evident that she did have recurrent tumor in her upper abdominal incision, measuring 3 x 3.5 cm. Therefore, she was started on 5-Fluorouracil therapy. This was continued on a weekly basis. In September, 1970, she developed ataxia probably secondary to drug therapy and treatment was stopped until symptoms abated. Treatment was restarted in latter September, 1970.

When seen at the office November 3, 1970, a mass was noted in the left lateral breast. An excision biopsy showed primary medullary adenocarcinoma. At the time of surgery a lesion from her forehead was removed which had been present for several months. The diagnosis was primary squamous cell carcinoma of the skin.

In December, 1970, 5-Fluorouracil therapy was resumed. In latter December, 1970, a resurgence of her subcutaneous epigastric nodules was noted. Cytoxan was added to her regime. These two agents were continued weekly.

In February, 1971, she was hospitalized because of recurrent upper abdominal complaints. Examination at that time showed three nodules in the upper abdominal scar of varying size and her upper GI series showed coarsening of the rugal pattern throughout the upper jejunum and slight widening of a portion of the duodenum. Her liver scan was normal. An exploratory laparotomy was carried out and abdominal exploration was negative for tumor. The subcutaneous nodules were excised and had the histologic features of mucinous adenocarcinoma, no doubt from her old carcinoma of the colon.

In April, 1971, while on chemotherapy, she noted a mass in the left supraclavicular region. An excision biopsy showed mucinous adenocarcinoma. Thereafter her chemotherapy was changed utilizing the COMF Program (Cytoxan, Oncovin, Methotrexate, Fluorouracil). In June, 1971, she became quite depressed and had suicidal thoughts. I thought at the time that this was either a side effect from Oncovin or possibly due to metastatic disease. The depressive symptoms abated when Oncovin was dropped from her COMF program. She received local x-ray therapy in latter June of

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1971 to two recurrent masses in the left supraclavicular region. This was tolerated well. 5-Fluorouracil was continued throughout this period.

In July, 1971, she complained of ataxia, and later on, Paranaud's Syndrome developed. A neurosurgical consultation was obtained. The disease was thought to be confined to the mesencephalon. She was started on high doses of Dexamethasone and was given Cobalt therapy to this area. At the time, she had blurring of vision, diplopia, severe ataxia and the inability to read or write. She never lost her powers of thinking or reasoning and her mood remained cheerful. While hospitalized she was courageous and most cooperative with those who attended her and had very few complaints. She would worry about whether I was getting enough sleep and how my upper respiratory infection was and she once told me that I was not to worry about her.

Toward the end of August, 1971, while hospitalized, she composed a poem. The next morning on rounds she gave it to me verbatim, although she was unable to record it. I was so impressed that I asked her when she was able to see properly and write, to record this as I wished to keep it.

She continued to do well and did make a fine response to her chemotherapy and radiation and about the first week of September, 1971, she wrote the following lines:

So—Formidable Enemy,
You've been discovered again!
You're not an honest foe!
You fight unfairly.

Any reputable disease has spots, or fever,
Some subtle warning—
But not you, you sly stealthy enemy.
You escape from the Surgeon's knife,
You hide from the Internist's chemicals,
You stagger from radiation,
then lay dormant, gathering your
strength to regroup.

I know you're there.
I feel your nagging presence—
But I no longer tremble at your name.
I shout the cursed syllables!
Cancer!
You have not won this battle;
You shall not claim my body!

She finished her course of Cobalt therapy to the mesencephalon on September 17, 1971, and completed a five day course of modified COMF therapy. She was able to return to her home and take care of herself.

I think the above words fairly well describe the foe we as physicians are trying to conquer. This woman has fought against odds that most patients with malignant diseases never have to face. Words actually are incapable of describing her spirit. I think she should serve as a model for physicians who do treat cancer to never be daunted by an enemy that someday will be conquered.



GRAND ROUNDS



The University of Kentucky Medical Center

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

Bromide Intoxication

CASE Report: *M. W #19-43-86-9*. This was the first UKMCH admission for this 60-year-old widowed white female with a history of chronic alcohol abuse, transferred from Danville State Mental Hospital.

Sixteen days before admission here, she was admitted to Danville Hospital with a recent history of increased alcohol intake followed by symptoms of delirium tremens. She was sedated with chlorpromazine but remained agitated. Three days later she developed a fever of 104° and was treated for a pneumonia with antibiotics and I.V. fluids. Ten days before admission, she was noted to have slurred speech and a right hemiparesis. Because of failure to improve, she was transferred to our medical service.

Physical exam: BP = 140/90, P=130, R=28, T°=102.6(R). Well-developed, obese woman with slurred speech, who responded to noxious stimuli only by grimacing (showing a left facial weakness). Pupils were equal and small but reactive to light. Vertical nystagmus was present. Neck was supple. There was a smooth diffuse enlargement of the thyroid. Scattered rhonchi and rales were present over both lung fields. The extremities were flaccid. Skin tugor was poor; spider angiomata were noted. DTR's in the upper extremities were 2 plus and equal. Abdominal reflexes, ankle and knee jerk reflexes absent. There was a questionable Babinski reflex on the right.

Lab Data: Urine-bile +, 10-25 rbc and 5-10 wbc. CBC - WBC 21,000 with left shift. Hgb. 14.4 gm%. BUN 33 mg%. Creatinine 0.8 mg%; serum amylase normal. Serum electrolytes (mEq/L). Sodium 134, potassium 4.3 $CO_2$24, chlorides *greater than 130*. Liver enzymes showed mild elevations and prothrombin time was 24 seconds with control 10.8. Spinal tap was within normal limits. VDRL nonreactive; brain scan normal. Initial serum bromide level 330 mg%. Skull films within normal limits. Chest X-ray showed right lower lobe infiltrate and findings consistent with old granulomatous disease.

Hospital Course: Following treatment with intravenous saline, intramuscular vitamin K and multivitamins, the previously noted neurological signs resolved and liver function tests, BUN and serum bromide level returned to normal.

Discussion

I would feel a great deal more comfortable if I had been called upon to discuss some types of drug dependence with a history longer than that of bromide intoxication. Dependence on opium and cannabis (marihuana) has been with us for 3,000 years or more; misuse of both substances is still quite popular. Bromide intoxication, on the other hand, has a history of only 150 years and unlike dependence of the marihuana and morphine types, poisoning with bromides is relatively rare.

Bromide came into clinical use in the first part of the 19th century. I do not know just how the sedative and anti-epileptic properties of the bromides were discovered. Perhaps this event was accidental and empirical. In any event, the bromides were introduced at a time when conditions were right for widespread use. In contrast to the older crude galenicals available, the bromide salts were pure chemicals, which permitted better control of dose than the old drugs. Bromides, though comparatively weak sedatives and anti-epileptics as compared

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with modern drugs, were efficacious than any other drug available for these purposes at that time. There were no "tranquilizers" and the "lunatics" raised "bedlam" in the wards of mental hospitals. I feel quite sure that if the modern advertising geniuses of the drug trade had existed early in the 18th century that they would have invented some catchy names comparable to "minor tranquilizers."

For these reasons, use of bromides spread rapidly particularly in mental hospitals. Use of bromides by psychiatric hospitals in London increased until these institutions were using several tons annually. Similar high use of bromides occurred in this century. In addition, the toxic properties of excessive amounts of bromide had not been recognized and simple chemical methods for determination of the concentration of bromide in blood were not available. For these reasons, chronic bromide intoxication was not recognized even though it must have been extremely common.

Use of bromides continued and increased until the development of the barbiturates early in the 20th century provided drugs that were more effective sedatives and anti-epileptics than the bromides. Even though the bromides became nearly obsolete by 1920, use of, and intoxication with, bromides continued. This was due in part to unwise prescribing by physicians but more important to the availability of proprietary mixtures containing bromide that were sold without prescription. These mixtures were widely advertised and, then as now, neurotic individuals searching for relief of their symptoms were prone to take too much medicine. A familiar sight to boys of my generation, working as "soda jerkers" at drug store fountains, were the regular customers who came in daily to drink their Bromo-seltzer. This mixture contained carbonates, citrates, analgesics, and bromides. It was dispensed from a machine, delivering a measured dose, that sat on the fountain. When mixed with water or with soda it gave a "fizzy, gassy" mixture that was poured from glass to glass after which the customer drank the "nauseous stuff". People with tension headaches and alcoholics treating their hangovers were particularly prone to take Bromo-seltzer.

The development of a simple chemical method for the measurement of blood bromide finally led to realization of the high incidence of bromide intoxication resulting from this over-availability. In 1927, a classic study showed that 21% of patients admitted to the pyschiatric division of the Johns Hopkins Hospital had excessive and potentially toxic levels of bromide in blood and 7% of these patients were admitted because of bromide psychosis.

In the 1930's, a revision in the Federal Food and Drug Law made it possible for the Food and Drug Administration to require all proprietary medicines containing bromides to carry a label stating that the drug might be habit-forming. Removal of bromide from Bromo-seltzer was forced with that famed mixture becoming Alka-seltzer. Unfortunately, the FDA had no authority to place bromides on a prescription basis only, so proprietary mixtures continued to be sold and even though the FDA now has authority to require prescriptions for bromides, some such mixtures are still available and can result in poisoning as occurred in the case under discussion today.

As a consequence of the labeling, the decline in prescribing by physicians, and the replacement of bromides by barbiturates and other sedative drugs, the incidence of bromide intoxication has declined progressively until it is rare today.

Pharmacology

The effects of bromides are due to the bromide ion and the particular salts used—sodium, potassium, ammonium—make no great difference. The bromides are salty in taste and nauseating so that acute poisoning with a massive dose never occurs because of vomiting. The bromide salts are readily absorbed and the bromide ion becomes distributed in the extracellular space and has the same space as the chloride ion. The body maintains the total halide concentration at a constant level so that as the bromide concentration rises the chloride concentration falls. The bromide ion is not bound, readily filters through the renal glomerulus and, like chloride, is resorbed in the renal tubule. The tubule resorption of bromide is slightly greater than that of chloride, accounting for the cumulation of bromides. The renal tubule resorption of bromide is inhibited by the same diuretic drugs that inhibit tubular resorption of chloride. Bromide is secreted into the stomach as hydrobromic acid but the bro-

mide ion is then resorbed in the small intestine. The bromide ion passes slowly into the cerebrospinal fluid attaining a concentration of about one-third that in plasma.

The outstanding pharmacodynamic effect of bromide is depression of all types of neurones within the central nervous system with the observable result being sedation, lethargy, stupor, and partial inhibition of all types of neuronal reflex arcs. The mechanism of the CNS depression is unknown. Since bromides do not penetrate cells to any degree and since bromides are distributed within the extra-cellular space the bromides are presumed to act by some effect on neuronal membrane. The effects of bromides are not due to hypochloremia or hyperkalemia.

Effects on organs other than the central nervous system are inconsequential.

Human Bromide Intoxication

Acute poisoning with bromides is rare since doses large enough to cause it invariably induce vomiting and diarrhea. Human bromide intoxication is always a slowly developing creeping condition due to slow cumulation of bromide because of repeated ingestion of excessive doses.

Like all chronic intoxication with central nervous system drugs, bromide poisoning is almost always a symptom of an underlying psychiatric problem. The most common predisposing conditions include anxiety neuroses, tension headaches, chronic alcoholism and aged people with chronic brain syndromes. Since bromides act so slowly, they are never taken for "kicks" by persons with psychopathic personalities. In modern drug users' slang, bromides are strictly "downers" and the "down" is not sufficiently rapid to be attractive.

The signs and symptoms of chronic bromide intoxication correlate roughly but not exactly with the concentration of bromide ion in serum. Poisoning of mild degree usually occurs with concentrations of 50-100 mg per 100 ml, and severe with levels of 250 mg per 100 ml or more. Epileptics tolerate high concentrations of bromide without signs of toxicity. Elderly patients may have severe intoxication with relatively low serum bromide concentrations.

The symptomatology of chronic bromide intoxication is protean but most manifestations are referrable to the central nervous system. Basically the condition is one of a chronic brain syndrome with varying degrees of clouding of consciousness, confusion, disorientation, and hallucinations with all sorts of superimposed symptoms.

Impairment of consciousness ranges from sedation and drowsiness through sleep to stupor. Coma from which the patient cannot be roused is extremely rare. Characteristically, the clouding of consciousness develops slowly over a period of days to weeks and marked fluctuation in the degree of clouding of consciousness from moment to moment usually occurs. The patient is confused in varying degrees in time and place. Due to the confusion, agitation may alternate with sedation.

Hallucinations are characteristic of severe poisoning and usually are visual. Auditory and tactile hallucinations also occur. Delusions of a paranoid sort usually seem to be based on the hallucinations. Affect is appropriate.

Neurological signs frequently occur but usually do not fall into a pattern suggestive of a definite neurological lesion. They include dysarthria, ataxia in gait and station, decreased tendon reflexes, and positive Bakinski signs. The pupils are not altered. In contrast to intoxication with barbiturates, nystagmus and other signs of vestibular dysfunction do not occur. Papilledema has been described but, if it truly occurs, its mechanism is obscure because of cerebrospinal fluid other than the presence of bromide ion. The electroencephalogram is diffusely slowed.

A bromide rash occurs in only 30% of patients with excessive levels of bromide in the serum who have signs of central nervous system dysfunction. Bromide rashes also occur in patients with no other signs of bromide intoxication. Two types of bromide rash are described: a truncal acneiform type with the papules containing no comodones, and tuberous type occurring usually over the shins.

The diagnosis of bromide intoxication should always be considered in any patient presenting with a history of slowly developing clouding of consciousness with or without disorientation and hallucinations. A history of taking or being given a salty tasting medicine is very suggestive. The diagnosis is nearly clinched by finding an elevated level of serum bromide but it is also necessary that the symptoms clear as the serum bromide falls during treatment in order

to be sure. Like almost any other condition, diagnosing bromide intoxication is largely a matter of thinking of the disorder and obtaining a serum bromide. As in our patient, a high serum "chloride" (measuring all halides) may be a tip off. At one time serum bromides were obtained routinely as a screening test in all patients with psychiatric symptomatology but, due to the low incidence of bromide intoxication in recent years, this practice has been abandoned. So the physician must think of disorder and have the test made. In the past, bromide intoxication has been confused with schizophrenia, central nervous system syphilis, brain tumors, etc.

In these days of multiple drug use, one must always remember that an elevated serum bromide level does not mean that the patient has not been taking other drugs, especially barbiturates and "minor tranquillizers" so, if possible, appropriate tests for these drugs should be made. It must also be kept in mind that bromide intoxication is usually a symptom of an underlying psychiatric or neurological disorder and that these conditions will be unmasked as the bromide intoxication clears. Accordingly, patients must be re-examined frequently.

Treatment

Bromide intake must, of course, be stopped. It is not unusual for patients to conceal bromides in their baggage or clothing with the result that bromide levels may increase despite treatment.

In addition to stopping the intake of bromide, elimination of bromides should be stimulated by supplying large amounts of sodium chloride and water, orally if possible, parenterally if need be. The basis of this treatment basically is for resorption in the renal tubule and bromide will also be flushed out by the water diuresis. Ordinarily one prescribes 1 gm of NaCl four times daily plus 3-4 liters of water per day. Usually this is all that needs to be done. If the patient is stuporous or noncooperative, 2-3 liters of normal saline per day intravenously may be used. Obviously, when one administers salt and water in these amounts careful monitoring of cardiac and renal status and of fluid and electrolyte balance is essential before and during treatment.

Since bromide ion is resorbed by kidney tubules, diuretics that inhibit the resorption of chloride will hasten clearance of bromide. Mercuhydrin, ethacrynic acid are effective. About all the diuretics do, however, is to hasten recovery and, if used, very close monitoring is required. The chief indications for forced diuresis are presence of very high serum bromide levels accompanied by stupor verging on coma, and bromide intoxication associated with some evidence of congestive heart failure or renal failure, provided glomerular filtration is not too impaired.

Bromide intoxication may, of course, be complicated by a variety of infections which must be sought out and treated appropriately.

As the intoxication clears, underlying conditions will be unmasked and, if possible, must be managed by appropriate treatment. Psychiatric treatment is practically always desirable.

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SPECIAL ARTICLES

Issues in Health†

J. Ed McConnell*

WHEN I accepted the invitation to be on your program tonight to attempt to discuss some of the issues in health and prepayment today, if I had even remotely thought that we would be in the midst of a wage-price freeze, I sure would have given some second thoughts about accepting, or at least had a different subject. The impact of this freeze on us, and I assume it is the same for most businesses in America, is staggering. The entire ballgame or picture has changed since August 15, and it is doubtful that things will ever be the same as they were prior to August 15.

Secretary of the Treasury Connally, a few days ago, said, "We are at the end of an era in our economic policy. It will be the disposition of the American people to have as few controls as possible after the 90-day freeze, and if we can get voluntary compliance now, we can avoid stringent controls later. But it would be unwise to think we can go back to where we were before. American business and labor may have to get use to the idea of living within certain parameters."

To give you some idea of the impact of this order on us, we can't increase rates on any group except under a most complicated formula which is difficult to understand and almost impossible to explain. For example, on experience-rated groups, we can change our rates only to the extent that the experience would have been entered into the formula and the calculation been made during the base period. There can be nothing in the formula projecting increased costs. We, therefore, are going to ride the freeze out.

Our rates have always been regulated by the Department of Insurance, and formulas have been developed and approved on all classes of members that when a certain point of utilization is reached on the group or classes of groups, new rates are projected based on the utilization of services and costs, plus overhead costs. (Incidentally, ours is the lowest in America for members of organizations of our size.) We can't sell an established group higher or additional benefits if it increases the employer's cost. New group sales by insurance companies are almost at a standstill. A company that now has a low benefit program and wants to switch their coverage to us or to another carrier and have a better program can't do it if it's going to cost the employer any additional money. Nor can we accept any increases in charges from providers; that is, hospitals, doctors, or nursing homes; nor can we increase any salaries. Fortunately, we are in a position to weather the storm for awhile, but some of our organizations in other states are on the verge of financial disaster and can't stand this freeze for 90 days. They must have relief or else they are going to have to modify their contracts and decrease benefits and payments to providers based on the income they are now receiving. The situation that most of these Plans are in, because of the financial squeeze, is not because of poor management. It is because of state regulation of their rates, and they have not been able to make increases as necessary to meet their costs. In one state, for example, Blue Cross and Blue Shield could make no rate increase without the approval of the governor. We are pleased to advise you that the Insurance Commissioners of Kentucky that regulate us have always taken a very responsible attitude.

The subject that I am supposed to talk to you about tonight is "Issues in Health Care and Prepayment." The issues in health are the cost of care and access to care, the location of professionals as well as facilities. These are very

†*Presented before the Kentucky Chapter, American Academy of Pediatrics, on September 21, 1971.*

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complex problems; there are no simple, pat answers or solutions. Health has emerged as an exciting issue, steeped in political, economic, social, professional and personal considerations, involving many challenges. It will not go away. The issues must be met head on by all of us involved. The only statement I can make regarding health care and prepayment, its cost and delivery, that I know is going to happen is that there is going to be change and there are going to be controls. A national health program may be on the back burner for awhile, because of the freeze, but severe controls might be enacted earlier.

A high percentage of the people in business, labor and government do not feel that competing forces of the voluntary free enterprise system are working in health, and even though we have always been regulated—that is, Blue Cross and Blue Shield—much more than insurance industries, we are also being severely criticized for not doing more in the area of cost control. Among other things, one reason is that we are the biggest, and the best. We are the conscience of the prepayment industry, and there is a well organized group pushing to exclude private or voluntary enterprise from financing of health care. There is no doubt that Blue Cross and Blue Shield Plans and insurance companies that sell health protection are going to be either federally regulated or regulated at the state level with uniform guidelines spelled out by the federal government. Many companies will not be able to qualify.

There is going to be, also, far more control over the building and location of health facilities than we now have. To quote Babson's Report of August 30, 1971, "Americans are becoming more dissatisfied with increasing medical, dental and hospital bills and more convinced that they're paying more and getting less." If comprehensive health planning doesn't succeed as it is now structured, laws will be passed by the state giving them the right to regulate the building of health facilities. Many states already control hospital charges. Forty-four percent of the population in America now live in states where hospital rates are now regulated by law or have pending legislation. I don't think that there is any question that hospital charges are going to be subject to review by some type of committee or commission just as the utilities are. Doctors' charges are now also frozen, but even prior to the freeze, there were isolated calls for the regulation of doctors' charges.

In a special health care message to the Michigan Legislature, Governor Milliken of Michigan said that the present system of regulations does not provide adequate authority to the state agencies that are involved in the health care field. It is imperative that we strengthen, he said, the regulatory system. I think it imperative that peer review and utilization review include not only the quality of care and doctors' charges, but admissions to hospitals, the length of stay in hospitals and the tests given. Admissions for the convenience of the patient, or for the doctor, whose bill is paid by any third party must be eliminated. So, we must eliminate the giving of tests just because a person has a prepayment program that pays for them.

If you have not read the August 30th issue of the American Medical News, I urge you to do so. It is a very serious matter to the doctors of America. I am one of those who think that doctors can regulate and police themselves. There is a quote from a government official that warns, "Unless effective self-regulation can be achieved, pressures will mount for tight federal control." And, gentlemen, if business and labor ever agree that they want these controls, they will be enacted. I urge any of you, get involved in your local community with business groups, in service clubs, chamber of commerce, get involved. You need their support and they need a better understanding of what medicine is doing and what medicine stands for. Medicine needs allies. If your hospital does not have an effective admission review committee, I urge you to get one organized and effective.

I am aware, as most leaders in Blue Cross and Blue Shield, of the need for and the desire of your specialty group that there be better prepayment programs for child care, that there be comprehensive preventive services for children; that your society is dedicated to the benefits of health supervision. One of your major objectives is to insure future generations of children, or future generations of people to be as free as possible from the handicap of prematurity, congenital malfunctions and preventable deficiencies, health benefits of infant care from birth through the first year, including regular examinations, assessment of

growth and development, early diagnosis, anticipation guidance, counseling and nutrition and immunization—all important to infants. I want you to know that we would like very much to provide all these and many other benefits, including custodial care for the elderly, plus more outpatient benefits, diagnostic admissions, examinations, etc. We can design these programs and rate them, but we can't sell all of them. We are making progress in these areas, but we can't force anyone to buy a program, and we don't want this authority—we are voluntary—also unions and companies in bargaining situations will haggle for days over a cent per hour.

There are many people who feel that if outpatient benefits were provided in connection with all hospital-surgical and medical programs, there would be a decrease of in-hospital patient care and thus be able to save money. Unfortunately, it doesn't work that way. In the first place, contracts are very specific as to what they will provide, and you have to have a rate in the contract for all items of service. In addition, contracts are negotiated with employers or sold to individuals or unions, and many labor-management contracts have spelled out in the contracts specifically the benefits that the members will be eligible for. Also, contracts are legal documents approved by the Department of Insurance. You can't arbitrarily increase or decrease benefits on a contract. We have tried experiments with some groups, and some groups have bought outpatient benefits. In every situation, more care is demanded by the people, more care has been delivered, and there has been no corresponding decrease of inpatient hospitalization. There have been no savings; in fact, just the opposite; there has been an increase in each of these situations in utilization and cost.

One of the groups that tried this is the Federal Employee Program. If you read the August 26 AMA News, you'll see the problem that we are wrestling with this group. Millions of dollars have been lost that have been spent in excess of the income from the group, which is about a billion dollars a year (over 65 million in the red) and now we are having to go back to Congress, to the Civil Service Commission for a substantial rate increase. Outpatient services, which we added two years ago, now account for about 50% of the total claims volume, and about one out of every four dollars in benefits is paid for outpatient benefits. There has been an increase in outpatient x-rays of 74%; laboratory services, a 144% increase. The Kentucky experience is not as bad as the national experience.

I have also been asked, "Why don't you have a deductible on all your programs?" We do have a deductible in many of our programs, and in many of them we have a co-pay provision. Unfortunately, the buying public doesn't particularly like deductibles, and the deductible, if it is to work, has to be enforced. Charges are too often increased and the deductible has been forgiven. This defeats the purpose of the deductible. There is some evidence that on a deductible on a hospitalization claim, after the deductible is satisfied, there is increased pressure from many of the patients on the doctor to let them stay an additional day or so, or to give some additional tests, checks, or so forth. A deductible also poses real problems for doctors in that they are time-consuming to collect and some people just absolutely won't pay them. Co-pay programs are more workable and have some merit and do tend to decrease the cost of protection to employers, as it shifts the cost from the company or the group program to the individual. Co-pay programs do not decrease the cost of care very much.

In regard to federal health programs that have been proposed, I have with me tonight brief descriptions of major bills that have been introduced which I will not go into. These descriptions or grids show how the bill will be financed, how it will be operated, how it will be administered. Only two of these programs proposed so far would be directly administered by the government and would by-pass a third-party payor. We are constantly asked by consumers as well as doctors, what about Blue Cross and Blue Shield and commercial insurance in the event of a national compulsory program? Regardless of what Congress does, we think there will be a very major role for voluntary organizations such as ours. Compulsory health protection won't solve today's health problems and won't reduce the cost of care. It won't increase the capacity of health professionals or the hospitals to deliver services. It will not improve the distribution of health professionals nor will it make an adequate spectrum of health care accessible to the sick or

injured. On the contrary, a complete compulsory health program could compound this problem.

The national position of Blue Cross and Blue Shield on national health insurance is to remain flexible and not endorse any of the programs that have been proposed, but to be free to criticize and make suggestions for all of them. I think that Blue Cross and Blue Shield and the better insurance companies will have a very major role if any program is passed. The job of trying to solve problems in the health field is so great it can't possibly be done by the government alone. There has to be more voluntary dollars and efforts flowing into the health care system, and not less. But something is going to pass, as nearly 60% of the members of the Senate and House of Representatives are sponsoring at least one bill relating to National Health Insurance. A vital part that we play, Blue Cross and Blue Shield, is financing plus helping identify public needs and wants, and also serving a vital feedback role to doctors and hospitals. We are the only organization that is daily out working with consumers; that is, people, business and labor, that is trying to do a public relations job for doctors and hospitals. It is our opinion that the public is not going to be satisfied with just what the government may feel is adequate, or what it might be able to pay for, regardless of how ambitious the government programs are. We have a rapport and understanding with people and providers at the local levels that the government does not have and cannot develop, plus a sympathetic understanding of the goals of patients and providers. We have much of the expertise and capacity to deal with the problem and also an understanding of the realities of health care. We can and do provide motivation, expertise, administration, marketing, finance, and professional relations; also, we are a data collecting base.

In today's climate, we have to make plans to the best of our ability based on assumptions. These assumptions that I'm going to spell out are based on the best intelligence that we can collect. They must be constantly updated, revised and refined. Our assumptions as of now, in regard to National Health Insurance, are:

1. That labor and management will support strong government standards and cost controls in health financing and delivery. In the national health insurance debate, labor will tend to support the Kennedy Bill and public administration of the program. The support may be qualified, we think, by growing concern in labor about costs.

2. Labor will oppose the deductibles and co-pay provisions and any reductions in employer contribution to mandated benefits. We think management will favor private administration but are critical of the existing financing and delivery systems. Providers will have considerable differences on the desired characteristics of a national health insurance program.

3. Consumer groups will push for representation on all health policy boards. Some will put increasing emphasis on security and protection against unpredictable high cost at the time of illness.

4. Public identification or public examination of health care delivery and financing arrangements will intensify as the systems are exposed and their weaknesses examined. In health care financing, we think there will be major changes in the health financing systems in the '72 to '75 time period due to legislative and administrative action by government.

5. We believe that there will be some type of mandated coverage and that a joint employer and employee program will be enacted covering workers and their families. Implementation, we think, will be phased in, beginning in 1973 and completed by 1975. We think that Blue Cross and Blue Shield and commercial carriers will have an opportunity to underwrite much of this program. There will be a catastrophic provision enacted that will cut in at the high dollar level of total medicine costs.

6. We expect there will be a family health insurance program enacted in 1972 and effective in 1973, and there will be opportunities to underwrite or administer this program. This, of course, would replace most of Medicaid.

7. Our people anticipate that in 1972 Medicare will include the totally and permanently disabled.

8. We anticipate that there will be a greater push for the establishment of HMO's and the development of alternative delivery systems.

9. The federal government will become more involved in the regulation of insurance and prepayment.

10. The public and the government will demand, we think, not only improved and uni-

form health care, but information and services in the area of preventive health measures, diet and nutrition, effects of pollution, emergency care, addictive drugs, and mental health problems.

11. Small employers probably will have mandated health programs through pooling arrangements.

We don't think that anything that is being done is going to solve the problem of custodial care which is a major problem for the elderly.

In closing, I want it clearly understood that I am no oracle; we don't have all the answers in health care and prepayment; we don't know what many of the questions and issues are. All of you have heard speakers who have all the answers but don't quite understand the questions. We do know that there is going to be change, and to influence change you have got to be knowledgeable; you must have facts; you have got to be involved. No one, today, in health—doctor, hospital administrator, or anyone in prepayment or in the health insurance industry—can be complacent.

D-Day is fast approaching; however, I don't think the picture is all black. More is right in health and prepayment than is wrong. Some critics say that the United States is the only advanced nation without a government system for financing health care. This may be true, but we are also the only nation in the world that has built a strong, effective, voluntary financing system for a majority of the people in the private sector. In recent years, more Americans have been receiving more and usually better medical care than ever before in the nation's history. Group practice and HMO's are not the panaceas as some of the zealous advocates claim. I think it is imperative in today's climate that medicine along with Blue Cross and Blue Shield and with friends in the insurance industry, and other allies—business and professional—work very closely together in the interest of better health care for all Americans and the voluntary system, and try to produce a mutually agreed upon position on the important issues. I think if we do pull together, we will not find ourselves under some type of Kennedy plan of national health insurance and will preserve the best of our voluntary system.

EDITORIALS

Where Were You?

THE 22nd Annual Interim Meeting of the Kentucky Medical Association was held in Somerset, Kentucky, on April 13 and 14, 1972. It was preceded on April 12 by meetings of the KMA Board of Trustees and the Kentucky Foundation for Medical Care Board of Directors.

Where Were You!

The program for the Interim Meeting, as most are aware, is devoted to socio-economic affairs as related to the medical profession in Kentucky, in distinction to the Annual Meeting where the program is almost entirely scientific in content.

Those who arranged the program for this year's meeting are to be commended. The subjects discussed were timely, the speakers were knowledgeable, and their messages were meaningful, providing information concerning, and in some instances answers to, the questions and concerns so frequently discussed these days in doctors' lounges.

Where Were You!

Representatives of the American Medical Association, including the President-Elect and the Assistant to the Executive Vice-President, discussed Medical Malpractice Liability, the Foundation Concept, and Health Care Costs. Doctor Ira Layton, Chairman of the Board of the National Association of Blue Shield Plans very ably presented that organization's role in health care today, projected its future role, and briefly mentioned the upcoming and long overdue dialogue between the leadership of AMA and Blue Shield which, hopefully, will lead to closer cooperation between the two.

The featured speaker at the dinner on Thursday evening was Senator Wallace F. Bennett, of Utah, the author of the "Bennett Amendment" which is now before Congress. Should the Professional Standards Review Organization (PSRO) proposal become law, it will certainly have a far-reaching impact on the individual physician as well as on organized medicine.

Where Were You!

Prepaid group practice was discussed by an expert in that method of delivery of health care, and the government's view of the over-all delivery of health care was presented by a representative of H.E.W. The program was closed with an excellent panel discussion on rising health care costs, with representatives of the government, consumers, hospitals and health planners expressing views which stimulated numerous questions from the audience.

Doctor Bob McLeod, Trustee of the 12th District, and the Pulaski County Medical Society literally "knocked themselves out" as hosts for this meeting. Cruises on the lake, bus tours, activities for the ladies and for the children, a golf tournament, a reception honoring the guest speakers, and other events almost too numerous to mention made this a most memorable Interim Meeting.

Where Were You!

The meeting was a tremendous success—from every point of view save one! A total of *99* physicians registered during the two days. If we deduct from that total the number of the Board of Trustees (80% in attendance), and the Foundation Board (100% attendance), and the program participants, we find that *71* physicians came to hear all or part of the program. A little further statistical research indicates that *22* of those physicians practice in Pulaski County.

All of which leads us to the sad realization that only *49* physicians from the other 119 counties bothered to attend the most timely and relevant meeting sponsored by KMA in recent memory.

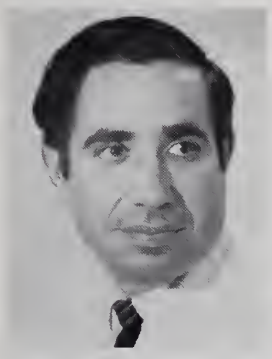
WHERE WERE YOU!

HENRY B. ASMAN, M.D.

ORGANIZATION SECTION

Guest Speakers To Provide Outstanding Scientific Program At 1972 KMA Annual Meeting, September 19-21

The 1972 KMA Annual Meeting once again will feature an outstanding scientific program presented by many prominent guest speakers who have accepted invitations to appear during the three-day session, September 19-21 at the Louisville Convention Center, according to John S. Harter, M.D., Louisville, KMA President.



Doctor Levy



Doctor Kyle

The KMA Scientific Program Committee has worked to arrange the program so that physicians in every medical specialty will be represented. A number of medical topics will be discussed by guests of the Association, specialty group speakers, and local physicians during the four general sessions of the meeting.

"Respiratory Distress," "Trauma," and "Atherosclerosis" are only a few of the themes chosen for the general session presentations.

The 1972 session will also include meetings of the specialty groups, two meetings of the KMA House of Delegates, the President's Luncheon, technical and scientific exhibits, and meetings of the Woman's Auxiliary to KMA.

Robert I. Levy, M.D., Bethesda, Md., and George Clayton Kyle, M.D., Philadelphia, Pa., have been invited by KMA to participate in this year's Annual Meeting. They will both appear on the September 20 morning and afternoon general sessions.

Doctor Levy's topics are "Simple Guides to the Diagnosis and Management of Blood Fat Disorders" and "Hyperlipidemia and Premature Coronary Disease, Past, Present, and Prospects."

A 1961 graduate of the Yale University Medical School, Doctor Levy is head of the Section on Lipoproteins, chief of Clinical Service, and chief of the Lipid Metabolism Branch, National Heart and Lung Institute in Bethesda. He is now serving on the editorial board of the *Journal of Lipid Research* and is a member of numerous medical and scientific societies.

The topics of Doctor Kyle's talks on Wednesday morning and afternoon will be "Diabetes: Is Glycemic Control Necessary?" and "Diabetes and Pregnancy."

Doctor Kyle is a Professor of Medicine at the University of Pennsylvania and has served as chief of the Diabetes Clinic at that University. He received his M.D. degree in 1947 from the University of Pennsylvania and is a Fellow of the Philadelphia and American College of Physicians.

Further details on other speakers and highlights of the 1972 KMA Annual Meeting will be carried in upcoming issues of *The Journal.*

AMA Annual Convention To Offer Varied Program For Physicians

The Annual Convention of the American Medical Association will be held June 18-22 in San Francisco. The Convention, AMA's 121st, will offer one of the nation's most extensive and varied medical education programs including seven formal postgraduate courses.

In addition to the Scientific Sessions, the AMA House of Delegates will study important issues of American medicine and set AMA policy on these issues. The Woman's Auxiliary to AMA will also hold its annual convention at this time.

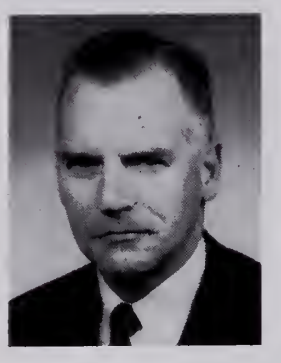
The program, which is published in the April 24, 1972 edition of *JAMA*, features 61 half-day programs, presented by 24 specialty sections. Accounting for the bulk of the convention's attendance, the scientific lectures, seminars, symposia, exhibits, and films are designed to help the thousands of physicians attending from all over the country to continually improve the quality of care they give their patients.

Presented for the first time at the Annual Convention, the postgraduate courses will offer credit toward the AMA Physician's Recognition Award. These continuing education courses will deal with acute respiratory failure, anorectal disease, antibiotics, common dermatoses, experiential learning, hand surgery, and liver disease.

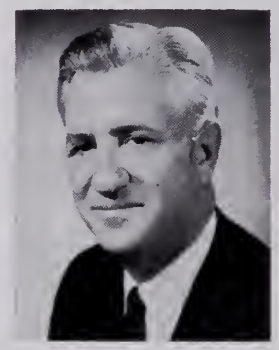
Wesley W. Hall, M.D., Reno, Nev., AMA President, urges all physicians to make their plans and reservations now for this exciting meeting.

KHA's Highest Award Presented To KMA Mbr., BC-BS Head

The Kentucky Hospital Association, at their Annual Meeting, April 17-19, presented the KHA Distinguished Service Award to James B. Holloway, M.D., Lexington, and J. Ed McConnell, Louisville.



Doctor Holloway



Mr. McConnell

Doctor Holloway, President of the Fayette County Medical Society, served as Chairman of the KMA Hospital Commitee from 1960-71. He aided in setting up the "dry-run accreditation" programs in the early 1960's. He and his committee provided advice to hospitals on matters of medical, staff, and other professional problems.

As President of the Kentucky Blue Cross and Blue Shield, Mr. McConnell has contributed much time and talent to the health field, not only in this state, but nationally. He was lauded by KHA for his civic activities as past president of the Louisville Rotary Club and Louisville Chamber of Commerce and his recent election as president-elect of the Kentucky Chamber of Commerce.

The Distinguished Service Award is the highest award given by KHA. Only 11 awards of this type have been presented since 1929 and Doctor Holloway is the second physician to ever receive this award. The other physician is the late Edward J. Murray, M.D. who received the award in 1957.

In other action during the KHA Annual Convention, James K. Wilson, Stanford, was chosen as President-Elect to succeed James V. Dorsett, Jr., Paducah, who was installed as KHA President. Mr. Wilson is administrator of the Fort Logan Hospital in Stanford.

Drs. Wikler, Swigart Receive 1972 Faculty Awards

The 1972 KMA Faculty Scientific Achievement Award was presented to Abraham Wikler, M.D., Lexington and Richard H. Swigart, Ph.D., Louisville, at the dinner session of the Interim Meeting, April 13.

Since the Award was established in 1962 by the KMA Committee on Medical Education, it had been policy to make the presentation at the Annual Meeting. Beginning this year, the Award will be presented annually at the Interim Meeting to a faculty member of each of Kentucky's medical schools. The recipient must have done outstanding research or have made a considerable contribution to the field of medicine.

Doctor Wikler is a Professor of Psychiatry and Pharmacology at the University of Kentucky College of Medicine. He has served as the Associate Director and Chief, Section on Experimental Neuropsychiatry at the National Institute of Mental Health Research Center in Lexington and is the past president of the Kentucky Psychiatric Association. Doctor Wikler has helped to establish the U of K College of Medicine as a recognized center of excellence in pharmacology and in research of addictive drugs.

Besides being Assistant Dean for Student Affairs, Doctor Swigart is also a Professor of Anatomy at the University of Louisville School of Medicine. He has demonstrated exceptional qualities of leadership and guidance in the area of student affairs, and has rendered invaluable service to the School of Medicine in research in the effects of age on adaptive responses and other problems of aging.



Recipients of the 1972 KMA Faculty Scientific Achievement Award pose with KMA President John S. Harter, M.D., Louisville, at the Interim Meeting in Somerset. Abraham Wikler, M.D., Lexington (left) and Richard Swigart, Ph.D., Louisville (right) proudly display their awards.

Plans Should Be Made Now For Scientific Exhibits

Arnold C. Williams, M.D., Lexington, Chairman of the KMA Scientific Exhibits Committee, urges all physicians interested in presenting scientific exhibits at the 1972 KMA Annual Meeting to make their plans soon.

Application for space should be received by July 1, 1972 at the KMA Headquarters Office. Exhibits need not be expensive or professionally constructed, but should have a good subject and be of teaching value.

This year's Annual Meeting will be held September 19-21 at the Louisville Convention Center. You will find an application for space for the scientific exhibits on page 412 in this *Journal*. For further information, contact the KMA Headquarters Office.

1972 Interim Meeting Highlighted By Outstanding Program, Speakers

The 1972 Interim Meeting has been praised as having a program that has not been excelled by many other meetings. Outstanding speeches and highly informative discussions were the products of the many guests and members who participated in the two-day event.

Held April 13-14 in Somerset, the Interim Meeting included a meeting of the KMA Board of Trustees and the Kentucky Foundation for Medical Care Board of Directors.

The Thursday morning session opened with a presentation on the Medical Foundation Concept by Joe D. Miller, Assistant Executive Vice-President of the American Medical Association. AMA President-Elect, Carl A. Hoffman, M.D., Huntington, W. Va., participated in a panel discussion on the Kentucky Foundation for Medical Care along with two Louisville physicians, Henry B. Asman, M.D., President of the Foundation and Marvin A. Bowers, Jr., M.D., Chairman of the Foundation's Claims and Utilization Review Committee.

Senator Wallace F. Bennett (R-Utah) addressed the KMA members and guests at a dinner session, Thursday evening. Speaking about his Bennett Amendment, the Senator reviewed his proposed Professional Standards Review Organization and its effects on medicine today.

A new feature of the Interim Meeting is the Faculty Scientific Achievement Award presentation which took place during the Thursday evening dinner session. Abraham Wikler, M.D., Lexington and Richard Swigart, Ph.D., Louisville were chosen as this year's recipients.

Grants from the AMA Education and Research Foundation were presented to the deans of the two medical schools in Kentucky. The Dean of the University of Louisville School of Medicine, Douglas M. Haynes, M.D., accepted a check for $7,826 for the U of L. William Jordan, M.D., Dean of the University of Kentucky College of Medicine was presented a check for $3,936 for U of K.

Health care costs was the topic for the Friday morning session which began with an enlightening speech by Chris Theodore, Director of the AMA Center for Health Services Research and Development. He was followed on the program by Watson Mundy, Deputy Director of the Atlanta Regional Office of HEW, who gave HEW's view of the health care industry.

Jeffery Cohelan, Executive Director of the Group Health Association of America, Washington, D.C., directed the members' attention towards prepaid group practice and its role in the '70's.

A panel discussion on approaches to rising health care costs closed the session. Moderated by Lee C. Hess, M.D., Florence, KMA President-Elect, the panel opened with a summary of the 1971 Kentucky Chamber of Commerce forums by John M. Lewis, who is now the President of the Iowa Utility Association. Comments were made by representatives from government, Mr. Mundy of HEW; from hospitals, Hasty W. Riddle, Executive Vice-President of the Kentucky Hospital Association; from consumers, Mead B. Ferris, General Personnel Manager, South Central Bell, Louisville; and from health planners, William P. McElwain, M.D., Commissioner of Health, Frankfort.



Taking notes during the Friday morning program of the 1972 KMA Interim Meeting are members of the panel on rising health care costs. Panel participants are (left to right) William P. McElwain, M.D., Frankfort; Mr. Mead B. Ferris, Louisville; Mr. Hasty W. Riddle, Louisville; Mr. Watson Mundy, Atlanta; Mr. John M. Lewis, Des Moines; and panel moderator Lee C. Hess, M.D., Florence, KMA President-Elect.

Ky. Surgical Society To Hold Mtg. At Lake Barkley

The Kentucky Surgical Society will hold its annaul meeting May 26-27 at Lake Barkley.



Doctor Coffey

Robert J. Coffey, M.D., Washington, D.C., will be the featured speaker for the two-day event. A professor of surgery at Georgetown University Medical School, Doctor Coffey will deal with "The Surgeon's Role in the Treatment of Hyperparathyroidism" and "Granulomatous Disease of the Small and Large Bowel."

Doctor Coffey has been president of the Southeastern and the Southern Surgical Associations. He is a consultant in surgery to several Washington, D.C. hospitals and to the National Institutes of Health.

In addition to Doctor Coffey's presentations, papers will be presented by several members of the Kentucky Surgical Society.

Alcoholism Seminar Set For May In Louisville & Lexington

Kentucky physicians will have an opportunity to update their knowledge of alcoholism in a seminar sponsored by the Kentucky Department of Mental Health through a grant from Pfizer Laboratories. The two one-day programs, entitled "Alcoholism: A Contemporary Re-appraisal," will be held Wednesday, May 17 at the Rodeway Inn Airport in Louisville, and Thursday, May 18 at the Hospitality Motor Inn in Lexington.

Morris E. Chafetz, M.D., Director of the National Institute on Alcohol Abuse and Alcoholism of the National Institute of Mental Health, will discuss the magnitude of alcoholism on the national level. "The Physician's Role in Diagnosis and Treatment of Alcoholism" will be presented by David H. Knott, M.D., Ph.D., while James D. Beard, Ph.D., will speak on "The Pathophysiology of Acute and Chronic Alcoholism." Doctors Knott and Beard are, respectively, Medical Director and Director of the Alcohol and Drug Dependence Clinic of the Tennessee Psychiatric Hospital and Research Institute.

Alcoholism is one of Kentucky's major physical and mental health problems. Over one-third of all admissions to Kentucky's state psychiatric hospitals are alcoholics. Over 400,000 Commonwealth residents are affected by the emotional and financial hardships associated with alcoholism.

The Office of Alcoholism, under the Kentucky Department of Mental Health, coordinates alcoholism programs in the state, through seminars such as this one, state psychiatric hospitals, and mental health centers.

The prime objective of this seminar is to provide reliable and up-to-date information about alcohol abuse and alcoholism for more effective efforts in combating the problem.

Application has been made for three hours of prescribed credit through the American Academy of Family Physicians for this seminar which is being held in cooperation with the KAFP.



Senator Wallace F. Bennett (R-Utah) receives a word of appreciation from KMA President John S. Harter, M.D., Louisville, (right) for his featured presentation at the Thursday evening, April 13, dinner session of the 1972 Interim Meeting in Somerset.

CIRCLEVILLE, OHIO — 25 miles south of Columbus. Needs physicians, especially General Practice. Population—area of 40,000 New hospital in planning stages. Contact Pickaway County Medical Society, c/o Administrator, Berger Hospital, Circleville, Ohio.

KSIM Mtg. To Feature Slides, Labor Leader & UK Course

The Kentucky Society of Internal Medicine will hold its annual meeting on May 19 at the Continental Inn in Lexington, according to John E. Myers, Jr., M.D., Louisville, President of the Society.

Two features of the meeting include a slide presentation concerning current procedural terminology which will run throughout the meeting and a speech by Sam Ezelle, Executive Secretary of the Kentucky AFL-CIO, Louisville.

The Society will also co-sponsor a course under the direction of Irving Kanner, M.D., Lexington, on May 19 and 20 at the University of Kentucky Medical Center. The course is entitled "The Problem-Oriented Medical Record" and will deal with a relatively new means of organizing medical records.



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Indications: For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture. The oral form is indicated also for intestinal amebiasis and amebic liver abscess.

Contraindications: Evidence or history of blood dyscrasia, active organic disease of the CNS, the first trimester of pregnancy and a history of hypersensitivity to metronidazole.

Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to those pregnant patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. Exacerbation of moniliasis may occur. In amebic liver abscess, aspirate pus during metronidazole therapy.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified. Flattening of the T wave may be seen in EKG tracings.

Dosage and Administration

For Trichomoniasis. In the Female: One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during, and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used,* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male:* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

For Amebiasis. Adults: For acute intestinal amebiasis, 750 mg. orally three times daily for 5 to 10 days. For amebic liver abscess, 500 to 750 mg. orally three times daily for 5 to 10 days.

Children: 35 to 50 mg./kg. of body weight/24 hours, divided into three doses, orally for ten days.

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Eastern Ky. Univ. To Host Seminar On Medical Aspects of Sports

Fatalities in high school football have increased tenfold in the last six years. Athletics are becoming more and more a vital part of the American way of life. Who is going to provide the needed care to these athletes and how are we going to put a stop to the rapidly increasing fatalities in contact sports? If you are interested in this subject or if you are practicing any care of the athlete, you are invited to attend the "Medical Aspects of Sports Seminar" to be held May 18 at 9:00 a.m. at Eastern Kentucky University.

Jointly sponsored by KMA, the Kentucky High School Athletic Association, and the Department of Health Education at Eastern, the one-day seminar will include lectures, demonstrations, and consultations especially designed for physicians, school administrators, teachers, coaches, trainers, and student managers.

For further details, contact either Robert N. McLeod, Jr., M.D., Somerset, Chairman of the KMA School Health Committee or Wilbur R. Houston, M.D., Director, Student Health Center, Eastern Kentucky University, Richmond.

NEWS ITEMS

Myron W. Wheat, Jr., M.D., formerly Chief of Thoracic and Cardiovascular Surgery at the University of Florida College of Medicine, has been appointed Professor of Surgery and is directing activities in Thoracic and Cardiovascular Surgery at the University of Louisville School of Medicine. A member of the American Board of Thoracic Surgery, Doctor Wheat began duties in Louisville February 1, 1972.

Charles C. Smith, Jr., M.D. and **Bernard I. Popham, M.D.,** both of Louisville were recently granted membership in the American College of Physicians. Doctor Smith is the Scientific Editor of *The Journal.*

Frank W. Randall, M.D., is now practicing in association with Arnold C. Williams, M.D., in Lexington. A family physician, Doctor Randall graduated from the University of Kentucky College of Medicine in 1970 and interned at Wesley Medical Center, Wichita, Kansas.

Raleigh R. Archer, M.D., has joined James B. Holloway, M.D., and Roscoe H. Playforth, M.D., in practice in Lexington. A plastic surgeon, Doctor Archer graduated from the University of Kentucky College of Medicine in 1965; interned at Vanderbilt University Hospital, Nashville; and served his residency at Vanderbilt University Hospital and the University of Kentucky College of Medicine.

Bernard L. Manale, M.D., is now a member of the faculty of the University of Kentucky College of Medicine. An orthopaedic surgeon, Doctor Manale graduated from the Louisiana State University School of Medicine, New Orleans; and interned and served his residency at the University of Kentucky Medical Center.

James A. Ewing, M.D., has recently gone into general practice with Henry Chambers, M.D. and Forest F. Shely, M.D. in Campbellsville. A 1968 graduate of the University of Louisville School of Medicine, Doctor Ewing interned at Tampa General Hospital and then served in the U. S. Navy.

Marcus L. Dillon, M.D., has recently joined the staff of the Veterans Administration Hospital in Lexington and is serving on the faculty at the University of Kentucky Medical Center. Specializing in thoracic and cardiovascular surgery, Doctor Dillon graduated from Duke University in 1947 and served as an intern and a resident at Duke Hospital in Durham, N.C.

Maynard L. Stetten, M.D., has joined the association of Doctors Fischer, Leatherman, Zoeller, and Kotcamp in Louisville in the practice of orthopaedic surgery. Doctor Stetten graduated from the University of Michigan Medical School in 1955; interned at Wayne County General Hospital, Eloise, Mich.; and served his residency in California, Michigan, and Texas.

William V. Banks, M.D., is now at the Northern Kentucky Health Department in Covington. A 1967 graduate of the University of Kentucky Medical Center, Doctor Banks specializes in public health-preventive medicine. He interned at the USPHS Hospital in Baltimore and recently completed his residency at Johns Hopkins University, Baltimore.

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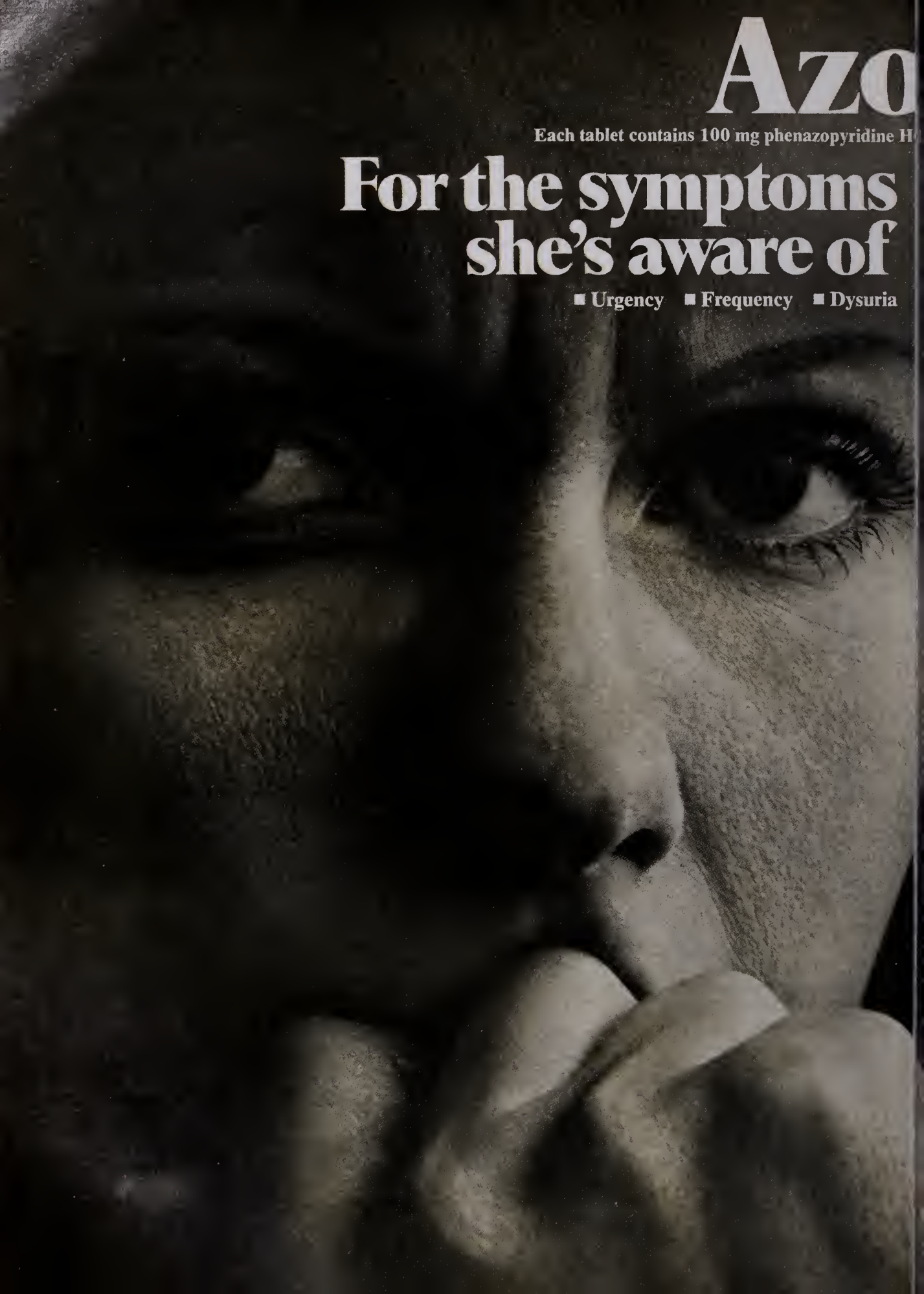
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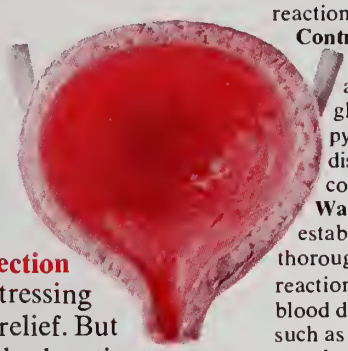
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Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established, and teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis, a frequently dose-related reaction, may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *allergic reactions:* erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *gastrointestinal reactions:* nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; and *miscellaneous reactions:* drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infection is 4 tablets initially, then 2 tablets morning and evening. If pain persists beyond seven days, causes other than infection should be sought. After relief has been obtained, continued treatment with Gantanol (sulfamethoxazole) may be considered.

NOTE: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

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1972 Annual Meeting — Kentucky Medical Association

Convention Center — **Louisville, Kentucky** — **September 19, 20, 21**

Fill Out and Mail to:

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Committee on Scientific Exhibits

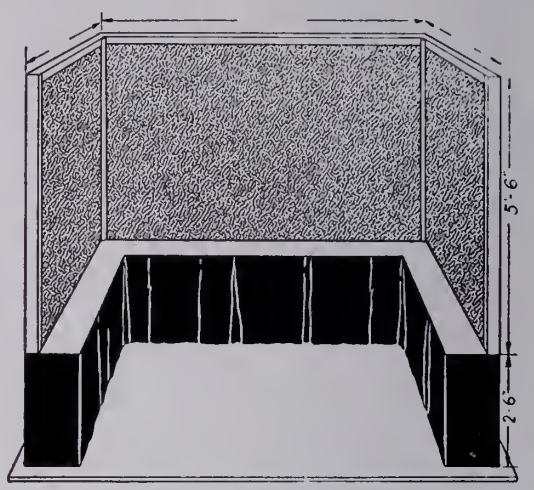
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Applications for space should be received before July 1, 1972.

The Kentucky Medical Association welcomes and supports scientific exhibits as a facet of continuing postgraduate education.



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2. Name(s) of exhibitor(s) .....

   Address .....

   Professional title .....

3. Institution if other than exhibitor .....

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6. Will summary printed matter be available or obtainable for the interested physician? .....

7. Indicate sources of assistance provided to you in connection with the exhibit .....
   .....

8. Has this exhibit been displayed before? If so, when & where? .....
   .....

9. Please attach a brief outline which includes a general idea of your exhibit.

Date ....
Signature of Applicant

KMA provides, without cost to the exhibitor, simple shelves, bracket lights and a title sign, provided all items are approved in advance by the Scientific Exhibits Committee.
Transportation and erection costs are the responsibility of the exhibitor.
View Boxes, furniture, decorations, etc., may be rented, if desired, by applying directly to the Joseph T. Griffin Company, 704 West Main Street, Louisville, Kentucky 40202.



rheumatoid arthritic blowup...

Tandearil® Geigy

oxyphenbutazone NF

tablets of 100 mg.

portant Note: This drug is not a simple analgesic. o not administer casually. Carefully evaluate patients fore starting treatment and keep them under close pervision. Obtain a detailed history, and complete ysical and laboratory examination (complete mogram, urinalysis, etc.) before prescribing and at quent intervals thereafter. Carefully select patients, oiding those responsive to routine measures, con-aindicated patients or those who cannot be observed equently. Warn patients not to exceed recommended sage. Short-term relief of severe symptoms with e smallest possible dosage is the goal of therapy. osage should be taken with meals or a full glass of ilk. Patients should discontinue the drug and report mediately any sign of: fever, sore throat, oral sions (symptoms of blood dyscrasia); dyspepsia, igastric pain, symptoms of anemia, black or tarry ools or other evidence of intestinal ulceration or morrhage, skin reactions, significant weight gain or dema. A one-week trial period is adequate. Discon-nue in the absence of a favorable response. Restrict eatment periods to one week in patients over sixty. *dications:* Acute gouty arthritis, rheumatoid arthritis, eumatoid spondylitis.
ontraindications: Children 14 years or less; senile atients; history or symptoms of G.I. inflammation or ceration including severe, recurrent or persistent rspepsia; history or presence of drug allergy; blood rscrasias; renal, hepatic or cardiac dysfunction; rpertension; thyroid disease; systemic edema; omatitis and salivary gland enlargement due to the ug; polymyalgia rheumatica and temporal arteritis; atients receiving other potent chemotherapeutic gents, or long-term anticoagulant therapy.
'arnings: Age, weight, dosage, duration of therapy, xistence of concomitant diseases, and concurrent otent chemotherapy affect incidence of toxic reac-ons. Carefully instruct and observe the individual atient, especially the aging (forty years and over) ho have increased susceptibility to the toxicity of the rug. Use lowest effective dosage. Weigh initially nredictable benefits against potential risk of severe, ven fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.
Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.
Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.
(B) 98-146-800-E

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

TA-8356-9



a new outlook in chronic pain

of moderate to severe intensity

Though Talwin® can be compared to codeine in analgesic efficacy, it is not a narcotic. So patients receiving Talwin for prolonged periods face fewer of the consequences you've come to expect with narcotic analgesics. And that, in the long run, can mean a better outlook for your chronic-pain patient.

Talwin Tablets are:

- **Comparable to codeine in analgesic efficacy:** one 50 mg. Talwin Tablet appears equivalent in analgesic effect to 60 mg. (1 gr.) of codeine. Onset of significant analgesia usually occurs within 15 to 30 minutes. Analgesia is usually maintained for 3 hours or longer.
- **Tolerance not a problem:** tolerance to the analgesic effect of Talwin Tablets has not been reported, and no significant changes in clinical laboratory parameters attributable to the drug have been reported.
- **Dependence rarely a problem:** during three years of wide clinical use, only a few cases of dependence have been reported. In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.
- **Not subject to narcotic controls:** convenient to prescribe—day or night—even by phone.
- **Generally well tolerated by most patients:** infrequently cause decrease in blood pressure or tachycardia; rarely cause respiratory depression or urinary retention; seldom cause diarrhea or constipation. If dizziness, lightheadedness, nausea or vomiting are encountered, these effects tend to be self-limiting and to decrease after the first few doses. (See last page of this advertisement for a complete discussion of adverse reactions and a brief discussion of other Prescribing Information.)

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic

a new outlook in chronic pain

of moderate to severe intensity



Contraindications: Talwin, brand of pentazocine (as hydrochloride), should not be administered to patients who are hypersensitive to it.

Warnings: *Head Injury and Increased Intracranial Pressure.* The respiratory depressant effects of Talwin and its potential for elevating cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a preexisting increase in intracranial pressure. Furthermore, Talwin can produce effects which may obscure the clinical course of patients with head injuries. In such patients, Talwin must be used with extreme caution and only if its use is deemed essential.

Usage in Pregnancy. Safe use of Talwin during pregnancy (other than labor) has not been established. Animal reproduction studies have not demonstrated teratogenic or embryotoxic effects. However, Talwin should be administered to pregnant patients (other than labor) only when, in the judgment of the physician, the potential benefits outweigh the possible hazards. Patients receiving Talwin during labor have experienced no adverse effects other than those that occur with commonly used analgesics. Talwin should be used with caution in women delivering premature infants.

Drug Dependence. There have been instances of psychological and physical dependence on parenteral Talwin in patients with a history of drug abuse and, rarely, in patients without such a history. Abrupt discontinuance following the extended use of parenteral Talwin has resulted in withdrawal symptoms. There have been a few reports of dependence and of withdrawal symptoms with orally administered Talwin. Patients with a history of drug dependence should be under close supervision while receiving Talwin orally.

In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.

Acute CNS Manifestations. Patients receiving therapeutic doses of Talwin have experienced, in rare instances, hallucinations (usually visual), disorientation, and confusion which have cleared spontaneously within a period of hours. The mechanism of this reaction is not known. Such patients should be very closely observed and vital signs checked. If the drug is reinstituted it should be done with caution since the acute CNS manifestations may recur.

Usage in Children. Because clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Precautions: *Certain Respiratory Conditions.* Although respiratory depression has rarely been reported after oral administration of Talwin, the drug should be administered with caution to patients with respiratory depression from any cause, severe bronchial asthma and other obstructive respiratory conditions, or cyanosis.

Impaired Renal or Hepatic Function. Decreased metabolism of the drug by the liver in extensive liver disease may predispose to accentuation of side effects. Although laboratory tests have not indicated that Talwin causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment.

Myocardial Infarction. As with all drugs, Talwin should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects of Talwin on the sphincter of Oddi, the drug should be used with caution in patients about to undergo surgery of the biliary tract.

Patients Receiving Narcotics. Talwin is a mild narcotic antagonist. Some patients previously receiving narcotics have experienced mild withdrawal symptoms after receiving Talwin.

CNS Effect. Caution should be used when Talwin is administered to patients prone to seizures; seizures have occurred in a few such patients in association with the use of Talwin although no cause and effect relationship has been established.

Adverse Reactions: Reactions reported after oral administration of Talwin include *gastrointestinal:* nausea, vomiting; infrequently constipation; and rarely abdominal distress, anorexia, diarrhea. *CNS effects:* dizziness, lightheadedness, sedation, euphoria, headache; infrequently weakness, disturbed dreams, insomnia, syncope, visual blurring and focusing difficulty, hallucinations (see *Acute CNS Manifestations* under WARNINGS); and rarely tremor, irritability, excitement, tinnitus. *Autonomic:* sweating; infrequently flushing; and rarely chills. *Allergic:* infrequently rash; and rarely urticaria, edema of the face. *Cardiovascular:* infrequently decrease in blood pressure, tachycardia. *Other:* rarely respiratory depression, urinary retention.

Dosage and Administration: *Adults.* The usual initial adult dose is 1 tablet (50 mg.) every three or four hours. This may be increased to 2 tablets (100 mg.) when needed. Total daily dosage should not exceed 600 mg.

When antiinflammatory or antipyretic effects are desired in addition to analgesia, aspirin can be administered concomitantly with Talwin.

Children Under 12 Years of Age. Since clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Duration of Therapy. Patients with chronic pain who have received Talwin orally for prolonged periods have not experienced withdrawal symptoms even when administration was abruptly discontinued (see WARNINGS). No tolerance to the analgesic effect has been observed. Laboratory tests of blood and urine and of liver and kidney function have revealed no significant abnormalities after prolonged administration of Talwin.

Overdosage: *Manifestations.* Clinical experience with Talwin overdosage has been insufficient to define the signs of this condition.

Treatment. Oxygen, intravenous fluids, vasopressors, and other supportive measures should be employed as indicated. Assisted or controlled ventilation should also be considered. Although nalorphine and levallorphan are *not* effective antidotes for respiratory depression due to overdosage or unusual sensitivity to Talwin, parenteral naloxone (Narcan®, available through Endo Laboratories) is a specific and effective antagonist. If naloxone is not available, parenteral administration of the analeptic, methylphenidate (Ritalin®) may be of value if respiratory depression occurs.

Talwin is not subject to narcotic controls.

How Supplied: Tablets, peach color, scored. Each tablet contains Talwin (brand of pentazocine) as hydrochloride equivalent to 50 mg base. Bottles of 100.

Winthrop Winthrop Laboratories, New York, N. Y. 10016 (1583)

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic

IN ASTHMA
IN EMPHYSEMA



optional therapy

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

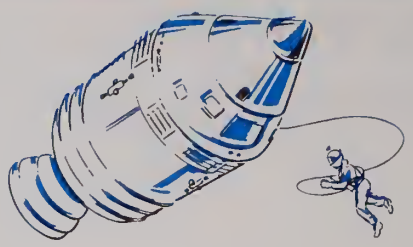
MUDRANE GG-2
A counterpart for Mudrane-2

MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



Man in space, now fait accampli, re-emphasizes the importance of Uro-Phasphate therapy. Research into the effect of space travel an the astronaut reveals that weightlessness causes loss af bone calcium. As the bones are required to bear less and less af the weight of the body they lase calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity af the urine should be adjusted ta keep increased calcium in salution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet cantains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection af the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets an retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

Wellcome
Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

A gratifying announcement about Empirin® Compound with Codeine



You may now specify up to five refills within six months when you prescribe Empirin Compound with Codeine (unless restricted by state law).

It is significant in this era of increased regulation, that Empirin Compound with Codeine has been placed in a less restrictive category. You may now wish to consider Empirin with Codeine even more frequently for its predictable analgesia in acute or protracted pain of moderate to severe intensity.

Empirin Compound with Codeine No. 3 contains codeine phosphate* (32.4 mg.) gr. ½. No. 4 contains codeine phosphate* (64.8 mg.) gr. 1. *(Warning—may be habit-forming.) Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½.



When you select this familiar antibiotic for IV infusion you have available a broad dosage rang that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections. In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomyc hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water But when 4 grams or more per day is given, Lincocin should be diluted in n less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

nfections caused by susceptible strains
f pneumococci, streptococci, and
taphylococci, including penicillin-
esistant strains. Staphylococcal strains
esistant to Lincocin (lincomycin
ydrochloride, Upjohn) have been
ecovered. Before initiating therapy,
ulture and susceptibility studies should
e performed. Lincocin has proved
aluable in treating patients hyper-
ensitive to penicillin or cephalosporins,
ince Lincocin does not share
ntigenicity with these compounds.
lowever, hypersensitivity reactions
ave been reported, some of these in
atients known to be sensitive to
enicillin.

Vell tolerated at infusion site: Lincocin
ntravenous infusions have not
roduced local irritation or phlebitis,
hen given as recommended. Lincocin
usually well tolerated in patients who
re hypersensitive to other drugs.
levertheless, Lincocin should be used
autiously in patients with asthma or
ignificant allergies.

n patients with impaired renal function,
ne recommended dose of Lincocin
hould be reduced to 25—30% of
ne dose for patients with normal
idney function. Its safety in
regnant patients and in infants
ss than one month of age has
ot been established.

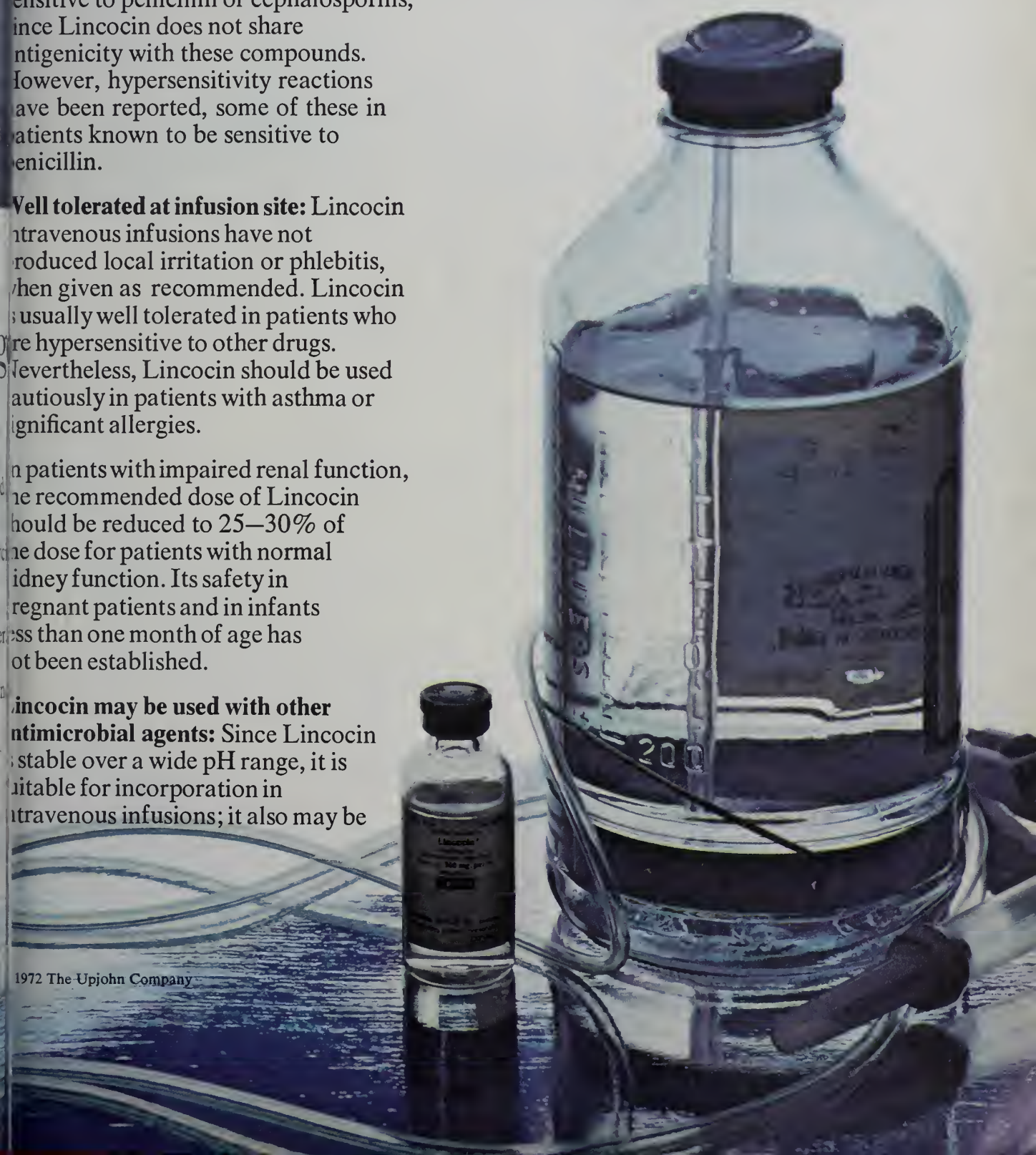
**incocin may be used with other
ntimicrobial agents:** Since Lincocin
stable over a wide pH range, it is
itable for incorporation in
ntravenous infusions; it also may be
administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



1972 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatme *Skin and mucous membranes*—Skin rash urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis ha been reported. *Liver*—Although no direct lationship to liver dysfunction is establish jaundice and abnormal liver function te (particularly serum transaminase) have be observed in a few instances. *Cardiovascu*—Instances of hypotension following par teral administration have been report particularly after too rapid IV administ tion. Rare instances of cardiopulmonary rest have been reported after too rapid administration. If 4.0 grams or more adm istered IV, dilute in 500 ml of fluid a administer no faster than 100 ml per ho *Special senses*—Tinnitus and vertigo ha been reported occasionally. *Local reactic*—Excellent local tolerance demonstrated intramuscularly administered Lincoc (lincomycin hydrochloride). Reports of p following injection have been infreque Intravenous administration of Lincocin 250 to 500 ml of 5% glucose in distill water or normal saline has produced local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *500 r* Capsules—bottles of 24 and 100. *Ster Solution, 300 mg per ml*—2 and 10 ml vi and 2 ml syringe. *Syrup, 250 mg per 5* —60 ml and pint bottles.

For additional product information, cons the package insert or see your Upjo representative.

MED B-6-S (KZL-7) JA71-16

The Upjohn Company
Kalamazoo, Michigan 49001

Upjoh

"The history of science, and in particular the history of medicine . . . is . . . the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

– George Sarton, from "The History of Medicine Versus the History of Art"

Should nongovernment scientists and physicians play a role in drug regulation?

Opinion

Results of a questionnaire to 7000 physicians:

82.8%
Physicians should play a role

78.3%
Independent scientists should play a role

69.8%
Medical academicians should play a role

Opinion & Dialogue

Dialog

Should nongovernment scientists and physicians play a role in drug regulation?

Doctor of Medicine

Herbert L. Ley, Jr., M.D., M.P.H., Formerly Commissioner, F.D.A. (1968-1969)
Currently Medical Consultant

In order for drug regulation to be effective, participation in the regulatory process from nongovernment physicians and scientists must be encouraged. Without such involvement, there will continue to be a high degree of controversy surrounding any regulations promulgated by the Food and Drug Administration.

There are two areas in which participation and communication by nongovernment physicians and scientists could significantly improve the process of regulation. First, scientists and physicians throughout the country could become involved in consulting relationships with the Food and Drug Administration in important scientific areas while regulatory policies are being evolved. If nongovernment professionals could bring their expertise and experience to bear early in the decision-making process, they would have less reason to criticize the final outcome.

Secondly, practicing physicians, academic physicians, and academic-based scientists could make it their business to comment on proposed regulations appearing in the Federal Register. Ideally, a system could be instituted whereby medical, scientific and technical people could see the Federal Register regularly, and provide the Food and Drug Administration with a body of opinion that has so far gone unheard. The FDA is caught among pressures from industry, Congress, the Presidential Administration and consumers. It should also feel pressures from practicing physicians and scientists.

In order to become more involved in these stages of the drug regulatory process, nongovernment physicians and scientists should begin to exercise their influence through their respective professional organizations,



state and national medical societies, and specialty groups. Logically, a letter from these organizations representing a collective opinion has far greater weight in the regulatory process than individual letters. If the Food and Drug Administration receives opinions from these organizations early, before a regulation gets into the Federal Register, they are in a good position to respond with further study and review. Without such dissenting opinions, there is very little incentive to make changes in proposed regulations.

One instance in which practitioners did influence drug regulatory affairs in this way is the recent controversy that arose over the legitimacy of drug combinations. The strong opinion of practitioners on the value of such medication in clinical practice played a very prominent role in making the Food and Drug Administration modify its rather restrictive policy.

Another way in which practitioners can effectively influence drug regulations is by working with drug manufacturers conducting clinical trials of chemotherapeutic agents. When a drug is rated other than effective it may only mean that there is a lack of controlled clinical evidence as to efficacy. Thus, physicians might offer to conduct clinical studies that could help keep a truly effective drug in the marketplace. The treatment of diseases such as diabetes and angina are areas where the practitioner can aid in clinical studies because patients suffering from these diseases are rarely found in the conventional hospital setting.

By working with ethically and scientifically sound study designs in his everyday practice, the practitioner could begin to play an important part in determining official ratings on drug efficacy.

Nongovernment physicians and scientists and the FDA should also improve their lines of communication to the public. The medical community must develop a voice every bit as loud as that of the consumerists, the press, and others who sometimes criticize without complete information. If not, much of wh the medical communi *and* federal regulators will often be represented simplistic and somewh misleading terms.

One illustration of t misuse of the media in tl regard is the recall of an coagulant drugs seve years ago. This FDA acti was given publicity by t press and television th went far beyond its pr able importance. The res was a very uncomfortal situation for the prac tioner who had patien taking these medicatio Since the practitioner a pharmacist had not be informed of the action the time it was publicize in most states they we deluged with calls fro worried patients.

The practitioner can a tempt to solve these pr lems of inadequate comm nication in several wa One would be the creati of a communications li in state pharmacy societi When drug regulation ne is to be announced, the s ciety could immediate distribute a message to e ery pharmacist in the sta The pharmacist, in tu could notify the physicia in his local community that he and the physici could be prepared to a swer inquiries from p tients. Another approa would be to use profe sional publications t practitioner receives.

All of this leads back my opening contention: drug regulation is to be e fective, timely, and relat to the realities of clinic practice, a better method communication and fee back must be developed b tween the nongovernme tal medical and scienti communities and the reg latory agency.

ue

Maker of Medicine

Henry W. Gadsden,
hairman & Chief Executive Officer, Merck & Co., Inc.



In my opinion, it is the sponsibility of all physi- ıns and medical scientists take whatever steps they ink are desirable in a law- ıd regulation-making ocess that can have far- aching impact on the actice of medicine. Yet any events in the recent ıst indicate that this is ot happening. For exam- e, it is apparent from ug efficacy studies that e NAS/NRC panels gave tle consideration to the idence that could have en provided by practic- g physicians.

There are several current velopments that should crease the concern of acticing physicians about ug regulatory affairs. One the proliferation of mal- actice claims and litiga- on. Another is the effort government to establish e relative efficacy of ugs. This implies that if physician prescribes a ug other than the "estab- shed" drug of choice, he ay be accused of practic- g something less than rst-class medicine. It ould come perilously ose to federal direction of w medicine should be acticed.

In order to minimize this nd of arbitrary federal tion, a way must be und to give practitioners th voice and representation in government affairs. Government must be caused to recognize the essentiality of seeking their views. One of the difficulties today, however, is that there is no way for concerned practitioners to participate in the early stages of decision-making processes. They usually don't hear about regulations until a proposal appears in the Federal Register, if then. By that time a lot of concrete has been poured, and a lot of boots are in the concrete.

Physicians in private practice, and particularly clinicians, should press for representation on the advisory committees of the Food and Drug Administration, joining with academic and teaching hospital physicians and scientists who are already serving. Though practitioners may not have access to all available information, the value of their clinical experience should be recognized. Clinicians, for example, rightly remind us that difficulty in *proving* precise effects does not necessarily mean a drug is ineffective.

Unless practitioners are more involved in drug regulations, it will be increasingly difficult for the pharmaceutical industry and scientists elsewhere to make optimal progress in drug development. The benefit/risk ratio must be re-emphasized, and as part of this it must be acknowledged that benefit can come from the judgments of medical science as a whole. Even this concept, unfortunately, is not always accepted in drug regulatory processes. For example, if current medical opinion holds that an excess of total lipids and cholesterol in the blood is probably predisposing to atherosclerosis, and if a drug is discovered which reduces total lipids and cholesterol, the drug ought to be accepted *prima facie* as a contribution to medical science . . . until someone disproves the theory. The sponsor should not have to prove the theory as well as to develop and test the drug.

I feel a major new effort must also be made to erase the feeling of mistrust of medicine and of medicines that seems to be growing in the public consciousness. Triggered primarily by strident announcements in Washington, people are reading and hearing confidence-shaking things almost continuously. Although challenge and awareness are essential to medical advancement, our long-term goal is constructively to build, not destroy. This means strengthening patient-physician relationships based on mutual confidence and trust. And in matters of health policy, it means working toward participatory rather than adversary proceedings—where everyone with an interest and a capacity to contribute has an opportunity to be heard . . . and, if that opportunity is not spontaneously afforded him, he may seek it.

Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.

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Indications: Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (*i.e.*, several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.

Contraindications: Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.

Warnings: When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexigenic effect; discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence: Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage in Pregnancy: The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage in Children: Not recommended for use in children under 12 years of age.

Precautions: In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorexic agent and a restrictive dietary regimen.

Adverse Reactions: Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration: The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

Overdosage: Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

How Supplied: Each Pre-Sate (chlorphentermine hydrochloride) tablet contains the equivalent of 65 mg chlorphentermine base; bottles of 100 and 1000 tablets.

Full information available on request.

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With the steady improvement in the therapy of cancer, and consequent increase in the number of 5-year survivals, our programs reflect increasing concern with the future of the cancer patient—with the *quality* of his survival.

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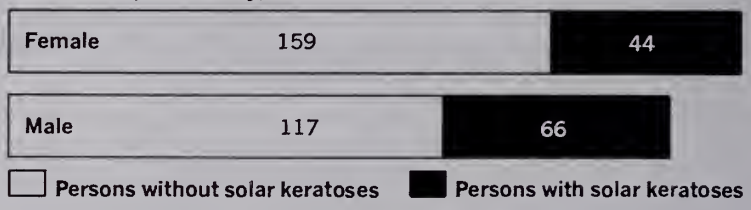
What it means to live and work in Tipton County, Tennessee

Persons who are white and over 40 have one chance in four of having solar keratoses... which may be premalignant

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

Prevalence of solar keratoses in white persons over 40 in Tipton County, Tennessee



*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction (only in affected areas)* usually occurs within two weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Cosmetic results

Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

5% cream–a Roche exclusive

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Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

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(fluorouracil)

cream/solution

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Will his return to work mean the return of undue psychic tension?



When it's mandatory to keep the post-coronary patient calm, consider Valium (diazepam).

Although he's promised to take it easy back on the job, you know he's going back to the same stressful circumstances that may have contributed to his hospitalization. If he experiences excessive anxiety and tension because of overreaction to stress, your prescription for Valium can bring relief. During the period of readjustment Valium can quiet undue anxiety.

For moderate states of psychic tension, 5-mg or 2-mg Valium tablets *b.i.d.* to *q.i.d.* can usually provide reliable relief. For severe tension/anxiety states, the 10-mg tablets often produce desired results.

The most commonly reported side effects are drowsiness, ataxia and fatigue. Until individual response is determined, caution patient against driving or operating dangerous machinery.

Valium® (diazepam)

For the tense cardiac patient who must be kept calm

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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The Journal of The KENTUCKY Medical Association



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KMA 1972 ANNUAL MEETING
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Everybody experiences psychic tension.



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Some people develop excessive psychic tension and need your counseling,



and a few may need counseling
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While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

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To help you manage excessive psychic tension



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Initially, only certain employee groups will have benefits under this system.

A general mailing is being sent to all Kentucky physician's offices providing specific details about the program. Questions regarding the new system should be directed to the Professional Relations Division.

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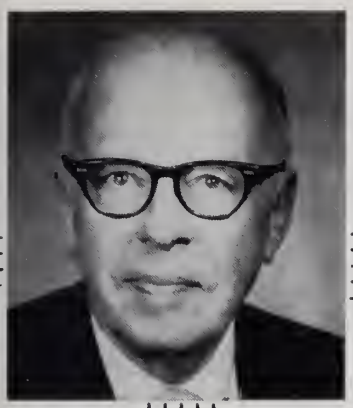
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BUYERS GUIDE

JUNE BUYERS GUIDE FOR JOURNAL OF KMA 1972

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MESSAGE FROM THE PRESIDENT

AS MEMBERS of KMA, you should be extremely proud of the new facilities which are now almost completed for your future use and benefit.

The addition to the KMA Headquarters building is now in final stages and several staff members have already moved to the new section. Plans are underway, as you know, to move the Division of Medical Licensure from its present quarters in the State Department of Health, Frankfort, to KMA Headquarters within the next few months. Your officers and Executive Director have been in close contact with the Commissioner of Health regarding the many details which will have to be worked out to make this move as soon as possible.

Obviously, a venture of this type is one of more than bricks and mortar. It's a constant reminder of the continuing growth of the programs carried out under the direction of your Kentucky Medical Association. Our deep involvement in programs at the local, state and federal level have made these new facilities imperative if we are to continue as the leader in upgrading health care programs for all Kentuckians.

As your President, I would urge you, at your first opportunity, to visit KMA Headquarters, inspect the new facilities and take pride in the many accomplishments which you have made possible.

John S Harter

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 30-year-old white married gravida 6, para 5, was under the care of a private physician, LMP was May 26, 1969.

She was hospitalized December 26, 1969 through January 4, 1970 with the diagnosis of pregnancy 7-1/2 months gestation, undelivered, painless vaginal bleeding due to placenta previa. Hgb 11.5 gm. She was treated for a urinary tract infection.

She was readmitted January 28, having irregular contractions, Hgb 12.6 gm, WBC 16,000, 85 segs, 4 meno, 11 lymphs, urine negative for sugar. She had a large amount of acetone, 3+ albumin and 100 WBC per HPF. Pelvic exam revealed the cervix thick, 3-4 cm dilated.

She received 25 mg Demerol and 25 mg Sparine for discomfort. She became nauseated and received 10 mg compazine IM and 1000 cc 5% GW. She then began to have what was described as a moderate amount of vaginal bleeding. She passed one to two small clots with no abdominal cramping.

She was typed and cross matched for two units of blood and started on Ampicillin for her urinary tract infection. Culture of the urine revealed the organism sensitive to Mandelamine but resistant to Ampicillin. She was switched to this and the Ampicillin discontinued. Her Hgb on February 2 was 12.2 gm. She had no more bleeding; the urinary symptoms cleared up and she was discharged February 15. The final diagnosis was approximately 8 month gestation, threatened premature labor, vaginal bleeding due to placenta previa marginales, improved. She was given Azogantrisin in addition to Ferrous Gluconate.

She was next seen February 27 when she was D.O.A. at the hospital. Her husband stated that she got up at about 4:00 or 5:00 a.m. to go to the bathroom, fainted and hit her head against the bathtub. He got her up and brought her to the hospital.

An autopsy was performed. She had a contusion of the right frontal region 3 cm in diameter.

Term size uterine pregnancy with 3900 gram male stillborn normal, cephalic presentation, the cervix was dilated 4-5 cm. The closing note of the pathologist is quoted:

"Neither gross examination nor microscopic sections show previous or present disease liable to cause death. Considering the patients full term pregnancy in the first stage of labor the only logical explanation for this patient's demise is neurogenic or primary shock."

There was no mention of membrane rupturing. There was no evidence of placenta previa or marginal hemorrhage. The microscopic exam of the lungs showed normally distended alveoli. The blood vessels were dilated and contained hemolized blood. The bronchial tree appeared normal with passive congestion.

Comment

The committee had great difficulty in interpreting the material presented to them in this given case. It is classified as an indirect obstetrical death for the picture is not clear. It is possible that the contusions she suffered may have been severe enough to cause her demise or that some toxic agent was responsible for her death. Although the Committee classified this as an indirect obstetrical death a comment was made that her management throughout pregnancy was not optimum in that a diagnosis of placenta previa was made and she was allowed to go home. It was the consensus of the Committee that she should have been hospitalized until delivery or perhaps delivery accomplished at an earlier date for the baby was certainly at sufficient size, that is 3900 grams, when the patient was found to be dead February 27th. Therefore, the baby must have been of ample size on the 15th of February. Again it is emphasized that this is certainly not a clear picture that was given to the Committee for study and analysis.

Continuing Educational Opportunities

From The

KMA Postgraduate Medical Education Office

SEND IN MEETING INFORMATION

Many medical organizations are setting dates for their fall and winter meetings. At the same time they are choosing the topics to be discussed, arranging for speakers and planning programs.

The Continuing Medical Education office of the Kentucky Medical Association would like to urge these societies and organizations to notify this office of these dates and topics so they can be added to the "Continuing Education Opportunities" calendar in *The Journal*. In this way conflicts in dates can be avoided and a wider audience can be informed of these upcoming meetings.

Please send such information, when available, to the KMA Continuing Medical Education Office, 3532 Ephraim McDowell Drive, Louisville, Ky. 40205.

IN KENTUCKY

JUNE

26-30 Annual Seminar, International Association of Coroners and Medical Examiners, Executive Inn, Louisville.

27 Postgraduate course, "Urinary Tract Infection in Infancy and Childhood," by Lawrence A. Davis, M.D., and Lonnie W. Howerton, Jr., M.D., 7:00 p.m., EDT, Children's Hospital Amphitheater, Louisville

JULY

19-20 Scientific Seminar, Kentucky Academy of Family Practice, Cumberland Falls Dupont Lodge

SEPTEMBER

19-21 KMA ANNUAL MEETING, Convention Center and Stouffer's Louisville Inn

IN SURROUNDING STATES

JUNE

14-16 Advanced Practical course, "Emergency Care and Transportation of the Sick and Injured," American Academy of Orthopaedic Surgeons, University of Tennessee, Memphis

JULY

21-22 Rocky Mountain Cancer Conference, Brown Palace Hotel, Denver

SEPTEMBER

11-12 AMA Annual Congress on Occupational Health, Drake Hotel, Chicago

20-23 Annual meeting, American Thyroid Association, Inc., Drake Hotel, Chicago

24-28 Annual meeting, American Academy of Ophthalmology and Otolaryngology, Convention Center, Dallas



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DELEGATES' DELIBERATIONS



Doctor Stevens

WHAT is "Organized Medicine"? The American Medical Association organized in 1847 as a representative democracy with delegates representing the individual states. This pattern has persisted with the addition of a few delegates representing specialty sections and the various Federal agencies. The policies of our national organization are determined by geographically selected representatives. The AMA House meets twice yearly to consider the various problems of the profession and of the nation as it relates to physicians.

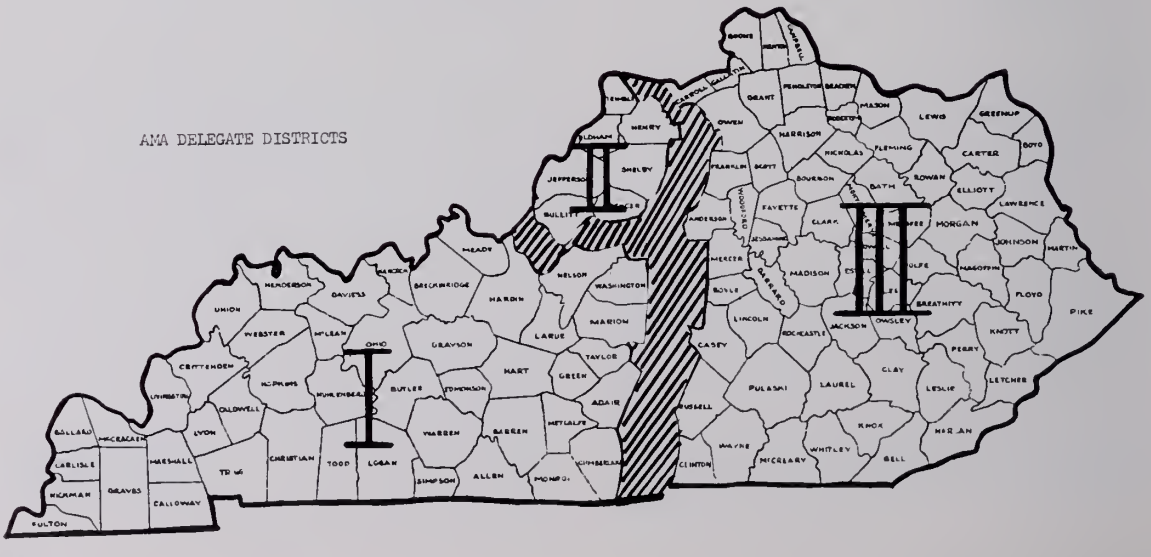
"Organized medicine" is the action directed by the elected representatives at the county, state, and national level.

The KMA Board of Trustees on April 12 authorized three separate AMA districts for Kentucky as shown on the accompanying map. Your delegates and alternate delegates are responsible to represent you, the individual members, at the national level. In the western part of the state (I) John Quertermous, delegate, and Fred Rainey, alternate delegate, are presently serving. Tom Giannini, delegate, and Charles Bryant, alternate delegate, represent the central portion of the state (II) and David Stevens, delegate, and Don Janney, alternate delegate, represent Northern and Eastern Kentucky (III).

This will provide a more direct link between the membership and the national policy-making organization. To be effective, the delegates and membership must know each other. The members of the delegation will visit county medical societies in their regions frequently enough to provide better communications.

The delegation challenges you, the members, to help establish this liasion and to identify your views and concerns. Contact your delegate or your alternate delegate—we are at your service.

DAVID B. STEVENS, M.D.
KMA Delegate to AMA





rheumatoid arthritic blowup...

Tandearil® Geigy

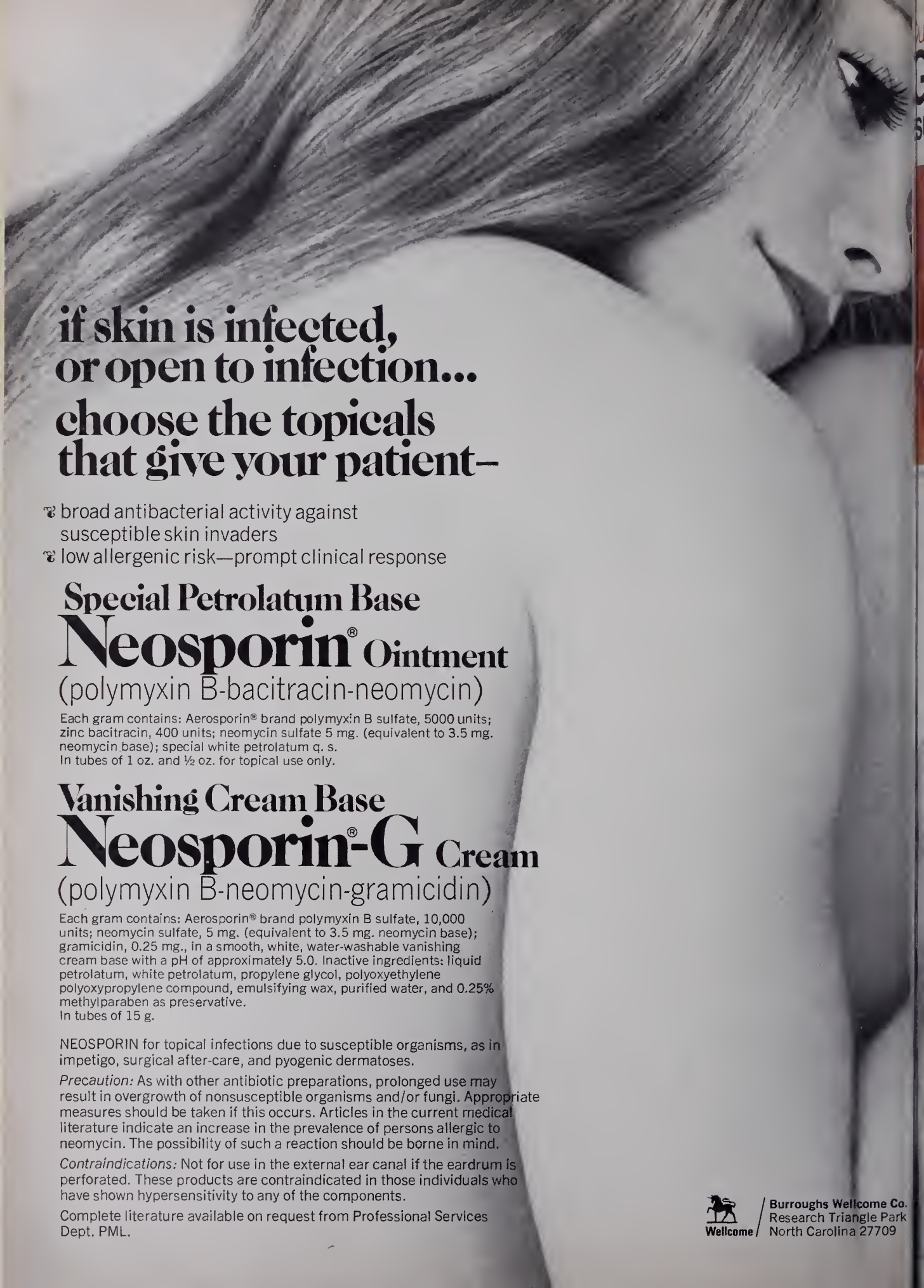
oxyphenbutazone NF tablets of 100 mg.

nportant Note: This drug is not a simple analgesic. o not administer casually. Carefully evaluate patients efore starting treatment and keep them under close upervision Obtain a detailed history, and complete hysical and laboratory examination (complete emogram, urinalysis, etc.) before prescribing and at equent intervals thereafter. Carefully select patients, voiding those responsive to routine measures, con- aindicated patients or those who cannot be observed equently. Warn patients not to exceed recommended osage. Short-term relief of severe symptoms with ie smallest possible dosage is the goal of therapy. osage should be taken with meals or a full glass of ilk. Patients should discontinue the drug and report nmediately any sign of: fever, sore throat, oral sions (symptoms of blood dyscrasia); dyspepsia, pigastric pain, symptoms of anemia, black or tarry tools or other evidence of intestinal ulceration or emorrhage, skin reactions, significant weight gain or dema. A one-week trial period is adequate. Discon- nue in the absence of a favorable response. Restrict reatment periods to one week in patients over sixty. *ndications:* Acute gouty arthritis, rheumatoid arthritis, heumatoid spondylitis.
Contraindications: Children 14 years or less; senile atients; history or symptoms of G.I. inflammation or lceration including severe, recurrent or persistent yspepsia; history or presence of drug allergy; blood yscrasias; renal, hepatic or cardiac dysfunction; ypertension; thyroid disease; systemic edema; tomatitis and salivary gland enlargement due to the rug; polymyalgia rheumatica and temporal arteritis; atients receiving other potent chemotherapeutic gents, or long-term anticoagulant therapy.
Warnings: Age, weight, dosage, duration of therapy, xistence of concomitant diseases, and concurrent otent chemotherapy affect incidence of toxic reac- ions. Carefully instruct and observe the individual atient, especially the aging (forty years and over) vho have increased susceptibility to the toxicity of the rug. Use lowest effective dosage. Weigh initially npredictable benefits against potential risk of severe, ven fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.
Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.
Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.
(B)98-146-800-E

For complete details, including dosage, please see full prescribing information.

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Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

TA-8356-9



if skin is infected, or open to infection... choose the topicals that give your patient–

- broad antibacterial activity against susceptible skin invaders
- low allergenic risk—prompt clinical response

Special Petrolatum Base
Neosporin® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 5000 units; zinc bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

Vanishing Cream Base
Neosporin®-G Cream
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services Dept. PML.

Wellcome

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North Carolina 27709

urrent G.U. Research

Gantanol® in animals
sulfamethoxazole)



trol



12.5 mg sulfamethoxazole/kg of body weight



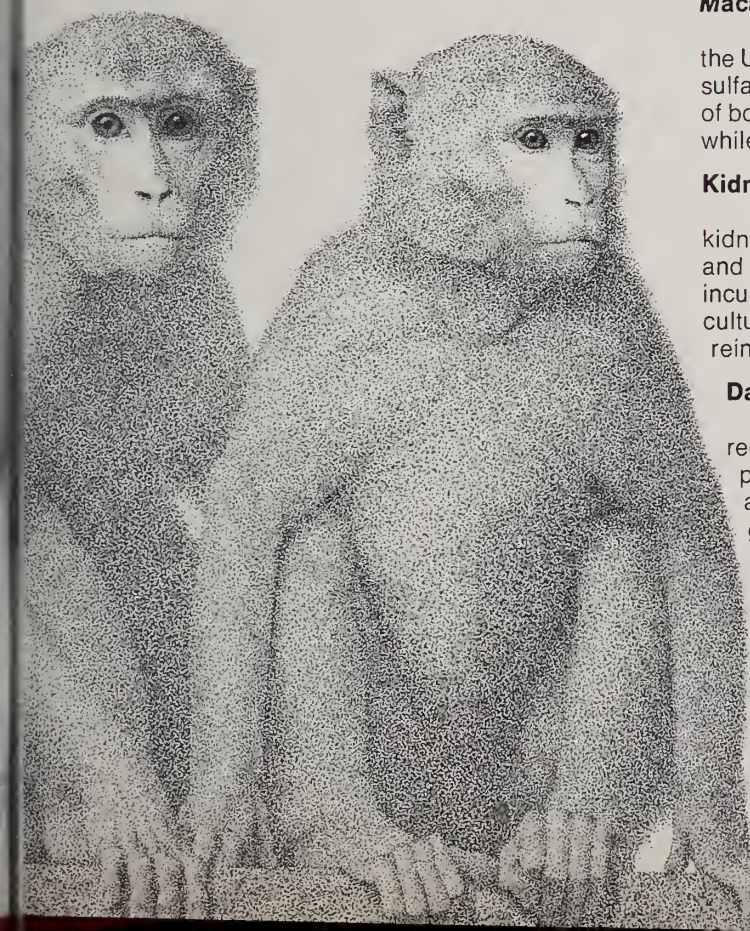
50 mg of sulfamethoxazole/kg of body weight



100 mg of sulfamethoxazole/kg of body weight

Tissue slice technique maps renal distribution in animal studies

Please note that while the method described may add to the knowledge of how antibacterial agents are distributed in the kidney of this animal, no conclusions can be drawn from this study relative to the drug's distribution, effect or use in humans, as it is not possible to extrapolate animal data to humans.



Gantanol® (sulfamethoxazole) administered to *Macaca speciosa* monkeys

Working with *Macaca speciosa* monkeys, researchers at the University of Arkansas Medical Center administered sulfamethoxazole at doses of 12.5 mg, 50 mg and 100 mg/kg of body weight. Each dosage level was given to three animals while three were left untreated as controls.*

Kidneys inoculated with *Staphylococcus aureus*

After 2½ hours, the 12 monkeys were sacrificed and their kidneys frozen with CO_2. Sagittal tissue slices were prepared and placed on blood agar bacteriological plates. They were incubated at 37°C. for 1½ hours. *Staphylococcus aureus* broth culture was then used to inoculate the tissue and slices were reincubated.*

Dark staining reveals heavy bacterial growth

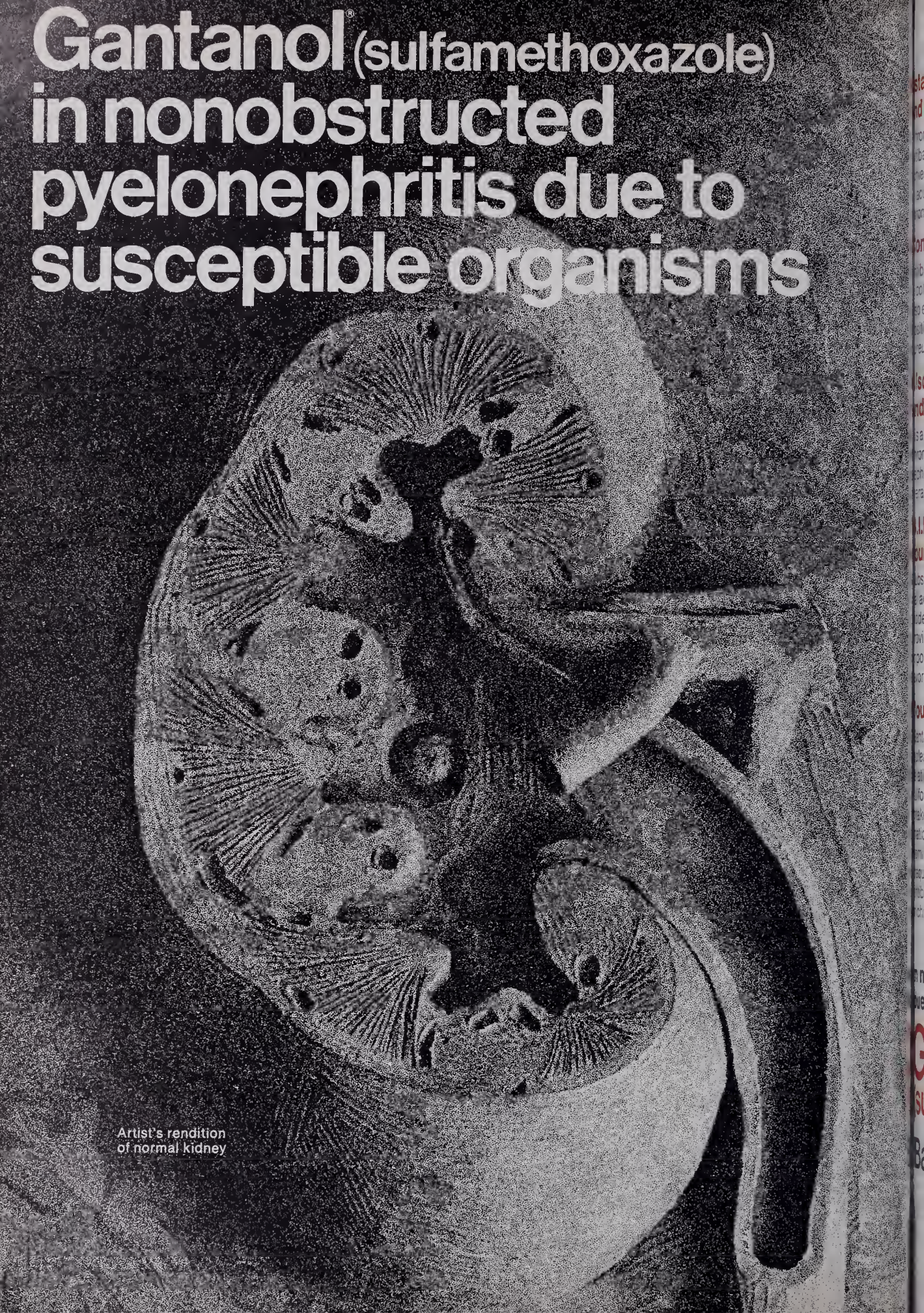
A solution of triphenyltetrazolium chloride, which turns a reddish purple in the presence of bacteria, was added to the plates after 6 hours. Renal slices from the untreated control animals consistently demonstrated heavy bacterial growth, as evidenced by dark staining.*

Distribution throughout *Macaca speciosa* renal parenchyma

At the dosage of 12.5 mg/kg of body weight, a diffuse stain pattern indicated partial inhibition of bacterial growth. Renal slices from monkeys given the 50 and 100 mg/kg doses showed no staining, indicating complete bacterial inhibition and *suggesting* antibacterial distribution throughout the parenchyma.*

*Mobley, J. E.; Redman, J. F., and Robbins, R. P.: *Surg. Gynec. Obstet.*, *131*:1122, 1970.

Gantanol® (sulfamethoxazole) in nonobstructed pyelonephritis due to susceptible organisms



Artist's rendition of normal kidney

tablishes antibacterial levels in blood d urine in from 2 to 3 hours

rom 2 to 3 hours of the initial 2-Gm adult dose, effective ibacterial levels of Gantanol® (sulfamethoxazole) are ieved in both blood and urine. This prompt, early treatment acute nonobstructed pyelonephritis may help avert possible onic sequelae.

ntrols primary bacterial offenders

tibacterial Gantanol (sulfamethoxazole) controls susceptible *coli,* the most common cause of urinary tract infections. It is o effective against other susceptible gram-negative and gram-sitive urinary pathogens such as *Klebsiella-Aerobacter, Staph. reus* and *Proteus mirabilis.*

lso effective in nonobstructed chronic nd recurrent urinary tract infections

s also common for the elderly and debilitated to develop onic nonobstructed urinary tract infections, primarily pyelo-phritis and cystitis. Such cases often respond satisfactorily to erapy with Gantanol.

.I.D./T.I.D. schedule gives ound-the-clock coverage

bsequent 1-Gm doses can provide up to 12 hours of antibacte-l activity. The *b.i.d.* dosage is recommended for mild to derate infections; the *t.i.d.* for the more severe u.t.i. Gantanol vides coverage around the clock—coverage that is especially portant during the hours of sleep, when urinary retention vors bacterial proliferation.

our option: tablets or suspension

antanol is available in two convenient dosage forms—tablets or leasant-tasting suspension. It is generally well tolerated with lative freedom from complications. The usual precautions with lfonamide therapy should be observed, including adequate fluid ake, frequent c.b.c.'s and urinalyses with microscopic exam-ation. The most common side effects reported are nausea, miting and diarrhea. (It should also be noted that the increasing equency of resistant organisms is a limitation of usefulness of tibacterial agents, including sulfonamides, especially chronic or recurrent u.t.i.)

n nonobstructed pyelonephritis ue to susceptible organisms

Gantanol®
sulfamethoxazole)

Basic therapy

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in acute, recurrent or chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris*) and in the absence of obstructive uropathy or foreign bodies.

***Note:* Since *in vitro* sulfonamide sensitivity tests are not always reliable, carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media of patients receiving sulfonamides. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents, including sulfonamides, especially in chronic or recurrent urinary tract infections.**

Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Sulfonamide hypersensitivity; infants less than 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis); pregnancy at term and during nursing period.

Warnings: Safe use in pregnancy has not been established, and teratogenicity potential has not been thoroughly investigated. Sulfonamides will not eradicate or prevent sequelae to group A streptococcal infections, *i.e.,* rheumatic fever, glomerulonephritis. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; early clinical signs such as sore throat, fever, pallor, purpura or jaundice may indicate serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination are recommended frequently during sulfonamide therapy. Clinical data are insufficient on prolonged or recurrent therapy in chronic renal diseases of children under 6 years.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *allergic reactions:* erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *gastrointestinal reactions:* nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; and *miscellaneous reactions:* drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age, except adjunctively with pyrimethamine in congenital toxoplasmosis. Usual dosage is as follows: *Adults*—2 Gm (4 tabs or teasp.) initially, then 1 Gm (2 tabs or teasp.) *b.i.d.* or *t.i.d.* depending on severity of infection. *Children*—0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, followed by 0.25 Gm/20 lbs (½ tab or teasp.) *b.i.d.* Maximum dose for children should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.
Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.
Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction, patients should be carefully monitored.
Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopeni malodor of the urine, crystalluria, hematuria; appearance of liv Ascaris in the mouth and nose. Hypersensitivity reactions

A New Dosage Form:

Chewable Tablets 500 mg Mintezol®
(THIABENDAZOLE | MSD)



so easy to take everyone in the family will keep to the regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.
Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

addendum

MSD MERCK SHARP & DOHME

INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infestations, whether encountered singly or in combination. Dosages are weight related; therefore, a weight-dose chart is included in the Direction Circular for your convenience when writing a prescription. MINTEZOL should be given after meals if possible.

INDICATIONS	DOSAGE (1st Day)	ADDITIONAL REGIMEN	COMMENTS
Pinworm disease	Two doses of 1 tablet/50 lb	Repeat 7 days later	This regimen is designed to reduce the risk of reinfection. However, if not practical, repeat the regimen the next day.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses of 1 tablet/50 lb	Repeat the next day	Alternatively, a single dose of 2 tablets/50 lb may be given. However, a higher incidence of side effects should be expected.
Creeping eruption	Two doses of 1 tablet/50 lb	Repeat the next day	If active lesions are still present 2 days after completing this regimen, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses of 1 tablet/50 lb	Repeat for 2 to 4 successive days	The optimal dosage for the treatment of trichinosis has not been established.

The recommended maximal daily dosage is 3 g (6 tablets).

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

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Currently, the increasing frequency of resistant organisms is a limitation of the usefulness of antibacterial agents including the sulfonamides, especially in the treatment of chronic and recurrent urinary tract infections.

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*Koch-Weser, J., *et al.*: *Arch. Intern. Med.*, *128*:399, 1971.

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Would it be useful in clinical practice to have government predetermine drugs of choice?

Opinion

Results of a survey of physicians:

13.3%
Yes, it would be useful.

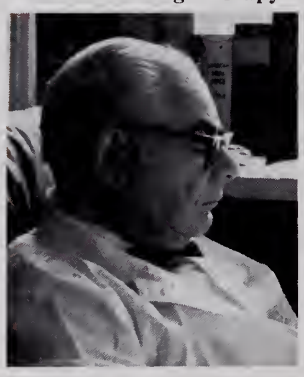
86.7%
No, it would not be useful.

Dialogue

Would it be useful in clinical practice to have government predetermine drugs of choice?

Doctor of Medicine

Walter Modell, M.D.,
Professor of Pharmacology,
Cornell University
Medical College,
Editor,
Clinical Pharmacology
& Therapeutics,
Drugs of Choice,
Rational Drug Therapy



The proposition that government should determine one or two "drugs of choice" within a given therapeutic class reflects the belief that a similarity in molecular structure insures a close similarity in pharmacologic effect. But this is by no means the rule. An obvious example would be in the field of diuretics, where a small change in chemical structure accounts for substantial differences in concomitant effects such as potassium excretion.

Any attempt to dictate the "drug of choice" would be complicated by the fact that some populations demonstrate a bimodal distribution in their reaction to drugs. If the data on drug response are mixed for the total population, one drug will appear to be as useful as the other. But if drug response is reported separately for different segments of the population, drug A will be found to be better for one group and drug B for the other.

It may, of course, be possible to determine drugs of choice in particular categories on a broad statistical basis. But there are always certain patients in whom a drug produces odd, unpredictable or idiosyncratic reactions. So, though a drug might statistically be the most useful one in a given situation, individual variations in response might make it the *incorrect* one.

The point I wish to make is that if two, three, four or more drugs in one class are of approximately equal merit, that in itself is justification for their availability. Exceptional cases do arise in which one drug would be useful to a certain segment of the population and another drug would be of no use at all. In the practice of medicine, the physician must be prepared to treat the routine as well as the unusual case.

Another objection to the determination of a drug of choice is that precise statements of *relative* efficacy are very difficult to make—much more difficult than statements of efficacy. For example, in testing drug efficacy, it is easy to determine the difference between a drug that is effective in treating a condition and one that is not at all effective. Thus, it is fairly easy to determine whether a drug is more effective than a placebo. But if you compare one drug that is effective with another drug that is also effective, and the relative differences between them are very slight, statements of relative efficacy may be very difficult to make with assurance.

I do not mean to imply that relative efficacy statements are not useful or can never be made. With some groups of drugs (e.g., analgesics), extensive study and precise methodology have yielded useful information on relative efficacy. But in most situations, such information can be acquired only through studies encompassing three to five years of use in many more patients than are used to compare drugs with a placebo for the introduction of a drug into commerce. It is really only after practitioners use a drug extensively that relative safety and efficacy in practice can really determined.

The Bureau of Drugs l suggested the package sert as a possible means communicating informat on relative efficacy of dr to the physician. I find t objectionable, since I not believe the physici should have to rely on t source for final scient truth. There is also a pr tical objection: Since f physicians actually d pense drugs, they seld see the package insert. any event, I would ma tain that the physici should know what drug wants and why without pending on the governm or the manufacturer to him.

Undoubtedly, physicia are swamped by excess numbers of drugs in so therapeutic categories. A I am well aware that ma drugs within such ca gories could be eliminat without any loss, or p haps even some profit, the practice of medici But, in my opinion, neit the FDA nor any ot single group has the exp tise and the wisdom nec sary to determine the "drug of choice" in areas of medical practice

Maker of Medicine

neth G. Kohlstaedt, M.D.,
Vice President,
Medical Research,
li Lilly and Company



n my opinion, it is not function of any governit or private regulatory ncy to designate a "drug noice." This determinashould be made by the sician after he has reed full information on properties of a drug, then it will be based on experience with this g and his knowledge of individual patient who eeking treatment.

an evaluation of comative efficacy were to be le, particularly by govment, at the time a new g is being approved for keting, it would be a at disservice to medi- and thus to the patient e consumer. For exam- when a new therapeuagent is introduced, on basis of limited knowle, it may be considered be more potent, more ective, or safer than ducts already on the rket. Conceivably, at s time the new drug ld be labeled "the drug choice." But as addiial clinical experience is umulated, new evidence y become available. er, it may be apparent that the established products should not be so easily dismissed.

Variation in patient response to drugs constitutes one of the major obstacles to the determination of "drugs of choice." We are just beginning to open the door on pharmacogenetics, but it is evident that genetic differences cause wide variations in the way drugs are absorbed, metabolized, etc. This fact alone is sufficient to make unrealistic the idea that there is one drug in each class to be used for every human being.

The problem of determining relative drug efficacy is an extremely complicated one. Comparison with other drugs of the same class should not be a prerequisite for marketing a new substance. In some therapeutic areas, it may be difficult to make accurate comparisons. For example, in the treatment of infections it is not possible to conduct crossover studies. Recovery may be influenced by factors which cannot be controlled or measured, i.e., natural host resistance and virulence of infective agents. A drug's acceptability must often be judged on the basis of its own performance, and this may be limited to experience in a relatively small patient population. If the introduction of a new drug must await the adequate establishment of relative efficacy, the duration of clinical trial and extent of studies would be greatly prolonged, particularly for rare or unusual conditions. The availability of a new drug would be delayed. Many patients might suffer needlessly and lives might be lost.

Relative efficacy can best be established by experience in a general patient population through regular channels of clinical practice. The physician considers the patient as a whole, which means the patient often has multiple problems and drugs must be selected with this in mind. Hence, a "drug of choice" in an uncomplicated case may not be the best drug for a patient with associated problems. Publication of well-controlled studies in medical journals may provide comparative evidence; discussions at medical meetings, presentations at postgraduate courses, and the new audiovisual technology may bring evidence to physicians on comparative therapy. In a free medical marketplace, a drug that does not measure up will fall into disuse. For example, broad clinical experience has established vitamin B_{12} as the "drug of choice" for the treatment of primary pernicious anemia. No amount of advertising or promotional effort by the manufacturer could increase the use of liver extract for this anemia. However, a physician may wish to employ parenteral liver preparations for a special purpose.

In the field of surgery, peer review in the hospital has brought significant improvement in the use of new techniques and procedures. Something of this nature would be useful in the area of drug therapy. However, it should be developed by the medical profession itself and would necessitate, for its proper function, an improvement in the dissemination of reliable data on clinical pharmacology of drugs under consideration.

Ideally, information on the relative efficacy of drugs should be gathered and assessed by the physicians who actually administer the specific agents to a specific patient population. To do this, they will need even more information on the drugs they use — information that the pharmaceutical manufacturers must begin to provide if government regulation of *"drugs of choice"* is to be avoided.

Opinion & Dialogue

What is your opinion, doctor?
Send us your comments on the above issue.

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Genetic and Environmental Factors in Ophthalmic Practice†

WILLIAM C. EDWARDS, M.D. AND THEODORE LAWWILL, M.D.

Louisville, Kentucky

This is a report of a statistical computer research project to evaluate hereditary and environmental factors affecting eye diseases and disabilities.

THE ophthalmic community has been made increasingly aware of the importance of genetics in diseases of the eye and adnexa. The resident student is introduced to this concept through such texts as Duke-Elder, Vol. III, Congenital Deformities[1]; Francois, *Heredity in Ophthalmology*[2]; and the volumes on *Genetics and Ophthalmology* by Waardenburg, Franceschetti, and Klein[3]. Sorsby has recently discussed the concept that there is a changing emphasis in the etiological factors in blindness and visual disability[4]. Sorsby reports that two centuries ago the leading cause of blindness in England was smallpox, whereas one century later, it was ophthalmia neonatorum. He concludes that there has now been a change in emphasis from infectious diseases as a cause of blindness and visual disability to those entities which are genetic in nature.

The primary research objective of this project was to perform a statistical evaluation of the hereditary and environmental factors affecting eye diseases and disabilities in a particular geographic area of the United States. The study was accomplished in the state of Kentucky where there are counties with minimal population migration activity, high regional rates of consanguinity, and geographically stable multiple generation pedigrees available for examination. The analysis was carried out within the framework of the referral clinics of the University of Louisville Department of Ophthalmology.

†*From the Department of Ophthalmology, University of Louisville School of Medicine. This study was supported in part by the N.E.I. Research Grant #00432 and the N.E.I. Training Grant EY00023.*
Reprint requests to William C. Edwards, M.D., 301 East Walnut, Louisville, Kentucky 40202.

Materials and Methods

The 1,266 patients in this study were seen by the staff of the University of Louisville Department of Ophthalmology at the Louisville Children's Hospital, the Kentucky School for the Blind, the Kentucky Lions Eye Clinic, and as private patients referred to members of the faculty. Most patients were seen because of an obvious or suspected eye problem. Major referral agencies included the State Commission for Handicapped Children, the Louisville Child Evaluation Center, and the Kentucky Lions Eye Foundation.

All new patients arriving at a given clinic in one day were interviewed, so that patients were not intentionally pre-selected as having hereditary disease. The genetic interviews were carried out over a two-year period by two successive technicians. Medical data was supplied from the chart or by the examining physician. The interviews were supervised and trained by the authors. The data from interview forms were punched on standard computer cards for manipulation and sorting by computer. All

records were reviewed by the authors prior to computer coding.

An interview form was developed from which data was keypunched on computer cards for analysis. The interview coding form, (Fig. 1) which also contains the 17 questions included in Table I, was designed to allow retrieval of as much hereditary data as possible within limited space on standard 80-column punched cards using available computer routines.

The socio-economic score (SES) was assigned by the interviewer according to the occupation of the father or head of the household. Ratings from 0-100 were used based on data published by the U.S. Census Bureau[5]. While these designations are not precise for all the local socio-economic structures, they do supply a gross measure for evaluating the relative position of patients.

The first punchcard for any patient contained all the information except diagnosis codes. Subsequent cards for a patient have the patient number and a card sequence number for that patient. Second subsequent cards (2 through n) for each patient contained diagnosis code numbers for: (a) patient's ocular diagnosis, (b) ocular diagnosis in the family, (c) patient's non-ocular diagnosis, and (d) non-ocular diagnosis in the family.

The ocular diagnosis code numbers were taken from the *Thesaurus for the Visual Sciences,* prepared by the Vision Information Center[6]. Non-ocular diagnosis codes not listed in the thesaurus provides a 13-digit alphanumeric code organized hierarchially to denote the type of information, anatomic location, and specific description or type of disease. Out of over 5,000 possible codes, between 200 and 300 were necessary for the first 1,266 patients. An attempt was made to find the most specific code for each disease of the patient. Some patients had multiple diagnoses to describe their several ocular and non-ocular abnormalities.

Several situations required judgment in deciding whether to classify a case as a familial or hereditary eye disease. Strabismus alone was so classified only when there was an obvious family line with several cases in the immediate family. The same was true with refractive errors, and then only in cases of high myopia or extreme hyperopia associated with microphthalmos.

The question of legal blindness was answered "yes" in a patient with less than 20/200 vision in the better eye. "Visually disabled" was defined as the best corrected vision being between 20/70 and 20/200 and thus qualifying for special education materials. Only gross deformities were coded as "cosmetic defects". Examples would include craniofacial disorders, lid anomalies, and buphthalmos. Strabismus was not coded as a cosmetic defect for the purposes of this study.

Results

Listed in Table I are the answers to 20 questions which bear most directly on the primary research objectives of the project.

FIG. 1 Interview coding form.

RESEARCH ON HEREDITARY BLINDNESS AND EYE DISEASE

Patient NO. (1-5) | NAME Last First Middle Initial (6-27) | Phone Number | Father's occupation

Address Street City | County(28-30) | State(31-32) | Birth Date | Soc. Sec # | SES

Hospital No.(s) (48-68) 1-LGH 2-Children's 3-VA 4-Private or Departmental | Patient's Sibling Rank (69-70)

Family Number: Mother (6-11) | Father (12-17) | Total No. Full Siblings (71-72)

Clan Nos. (18-22) | (23-27) | (28-32) | (33-37) | Total No. Half Siblings (73-74)

A. B. C. D.

LABORATORY OR DIAGNOSTIC MATERIAL AVAILABLE ON PATIENT:

(55) Yes No Photography
(56) Yes No Microbiology
(57) Yes No Uveitis
(58) Yes No Neurophysiology
(59) Yes No X-Ray
(60) Yes No Special Chemistry
(61) Yes No Pathology
(62) Yes No Other

Patient's Name | Patient's Number

PATIENT'S DIAGNOSIS (eye) | PATIENT'S DIAGNOSIS (other)

FAMILY DIAGNOSIS (eye) | FAMILY DIAGNOSIS (other)

TABLE I

Answers From Computer

	No.	(%(
1. Totol number of potients recorded on computer	1266	
Number of potients answering yes to:		
2. Does potient hove known hereditory or fomiliol eye diseose	496	(39%(
3. Does hereditory or fomiliol eye diseose occur in patient's fomily	477	(38%(
4. Does hereditory or fomilial eye disease occur in patient's fomily? If so, is it the some or different disease as potient's ..... Same —	424	(92%(
Different —	53	(8%(
5. Does non-ocular hereditary or fomiliol disease or defect occur in potient	47	(4%(
6. Does patient have known hereditary or familiol eye diseose, Does non-oculor hereditory or familial diseose or defect occur in potient	25	(2%(
7. Does non-oculor hereditory or familio(diseose or defect occur in fomily	219	(18%(
8. Does non-oculor hereditory or familiol disease or defect occur in fomily, If so, does potient have same disease or defect	18	(9%(
9. Is the potient legolly blind or o condidate for the Blind School	203	(16%(
10. If so, is the cause due to hereditary or fomiliol disease	93	(47% of legolly blind(
11. Is potient visuolly disobled (education mode more difficult(by eye disease	54	(4%(
12. If so, is this o hereditory or fomilial eye diseose	37	(71% of visuolly disobled(
13. Number of potients either legally blind or visually disabled	257	(20%(
14. Number of patients either legolly blind or visuolly disobled due to o hereditory cause	130	(51% of totol legally blind or visuolly disabled(
Number of potients answering yes to:		
15. Does potient hove o significant cosmetic-defect involving eyes or adjacent facial areo	88	(7%(
16. If so, is this a hereditory or fomiliol diseose or defect (significont cosmetic defect(	39	(46% of totol with significont cosmetic defects)
17. Is retordotion suspected	62	
18. Is retordotion known	69	
19. Total number of cases of strabismus	680	
20. Number of coses of hereditory strobismus	336	(49% of all coses of strobismus)

The proportion of patients with familial eye disease in this study was high (39%). When cases of familial strabismus were excluded from this group, the proportion was reduced to 21%. Of the 270 cases of other familial eye diseases, 111 had an associated diagnosis of strabismus.

Two hundred and three cases in the study were legally blind. Of these 203 cases, blindness was attributable to familial eye disease in 93 (47%). "Visually disabled" numbered 55. Of these 55, the disability was attributable to familial eye disease in 37 (71%). Of 128 cases of non-familial eye disease causing blindness or visual disability, 49 were cases of retrolental fibroplasia. Therefore, when retrolental fibroplasia, a potentially preventable disease, is removed from this category, 61% of blindness or visual disability was caused by familial eye disease.

Of 88 cases of significant cosmetic defects involving the eyes or adjacent facial area, 39 were caused by hereditary disease (46%).

Of the 129 cases of retardation, 39 had familial eye disease. It is interesting to note that 54% of the cases of retardation also had a diagnosis of squint.

Of 219 cases with history of non-ocular hereditary disease in the family, 101 had familial eye disease themselves, 52 with simple strabismus, and 49 with more serious ocular disease. In 219 cases with a history of non-ocular hereditary disease in the family, 102 also had a history of hereditary ocular disease in the family.

The socio-economic status showed a significant difference between groups within the study. The over-all average was low, approximately 20 on a scale of 100. The standard deviation of these scores was also relatively small, showing the population studied to be grouped at lower socio-economic level with little spread. There was a small, but significant, difference in SES score (less than .01) between the 270 patients with hereditary eye disease other than strabismus and the 771 without hereditary eye disease with the latter having a higher score.

Additional lists are provided to show the incidence and nature of the eye diseases recorded in two years' operation of the University of Louisville Pediatric Ophthalmology clinics (Table II).

Discussion

A previous survey by our department reported the results of eye examinations in 100 consecutive admissions to the Kentucky School for

the Blind[8] (Table III). Here the leading cause of blindness was retinopathy of prematurity (42%) (Fig. 2). Even this disorder may be considered "environmental" in the broad sense as it is a condition brought upon by "improvements" in modern medical science. All evidence indicates that retinopathy of prematurity has been drastically reduced in frequency by changes in oxygen monitoring (Fig. 3). Therefore, our own statistics would indicate that if the 42% of cases of blindness due to RLF are significantly reduced, that the categories of hereditary and familial causes (29%) will become the major etiological factor in infantile blindness (Fig. 4).

TABLE II

Computer Data Retrieval Sample
Ocular Diagnoses: 1266 cases

DIAGNOSIS	NO. OF CASES
Strabismus	680 (53.7%)
Refractive error	292 (23.1%)
Amblyopia ex anopsia	87 (6.9%)
Congenital cataracts	70 (5.5%)
Nystagmus	66 (5.2%)
Retrolental fibroplasia	49 (3.8%)
Ptosis	39 (3.1%)
Normals	37 (2.9%)
Hereditary macular degeneration	28 (2.2%)
Lens opacity	25 (2.0%)
Hereditary tapetoretinal degeneration	22 (1.7%)
Atrophy of optic nerve	21 (1.6%)
Posterior uveitis	21 (1.6%)
Congenital glaucoma	18 (1.4%)
Traumatic cataract	17 (1.3%)
Glaucoma, other	17 (1.3%)
Microphthalmos congenital	16 (1.2%)
Congenital aniridia	12 (1.0%)
Others (91 conditions and syndromes each less than 1% of total)	

A study of 233 cases of blindness was performed in British Columbia by Robinson, *et al.* These authors found 13.7% of these cases were due to genetic causes. They also emphasized the fact that over 50% of the children had a second handicap such as deafness, developmental retardation, cerebral palsy, epilepsy, or congenital heart disease. They also felt that a visual examination was helpful in planning suitable education facilities for developmentally handicapped children.

Of the 1,542 genetically determined diseases listed by McKusick, 236 (15%) have ocular findings[10]. Thus, as has been stressed by Falls[11], ophthalmologists are in a uniquely favored position to study these disorders. Spaeth has emphasized the importance of ophthalmic genetic research in his article, "New Concepts in Genetics"[12].

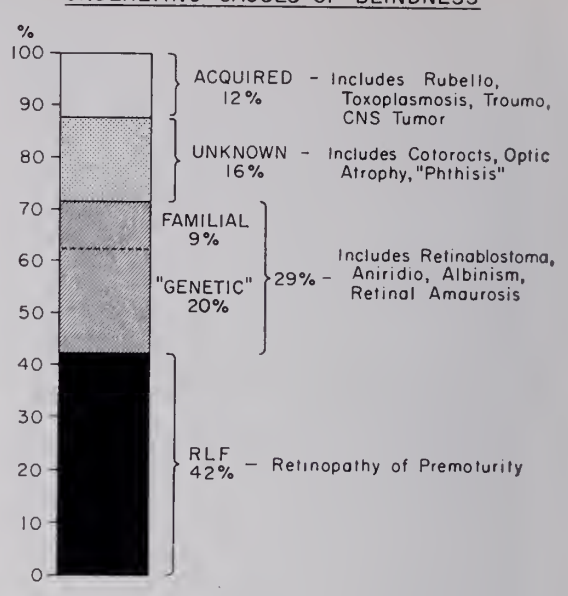


FIG. 2 Underlying causes of blindness in Kentucky (100 cases)

A study has been made in England of 776 blind children by Fraser in which it was found that 38% of the diagnoses in this services were hereditary disorders[13]. It was noted in this same series that 17% of the children were blind secondary to autosomal dominant eye diseases and 5% were blind secondary to sex-linked problems. Where patterns of this nature can be identified in family genealogy, genetic counseling might be of value.

In the above-mentioned series, 16% of the children were blind due to hereditary disorders that were labeled autosomal recessive. Recessive hereditary disorders in ophthalmology provide more difficult problems for family counseling, but they too are worthy of further investigation.

Several fascinating studies have appeared concerning the incidence of eye disorders in more primitive societies. These studies emphasize in dramatic fashion the importance of environment and civilization in increasing the genetic pool of hereditary eye defects. They also delineate significant differences in eye disease between "Western" and "non-Western" civilizations. An ophthalmic survey of 333 Maori people showed a low incidence of serious ocular disorders and no instance of either

glaucoma simplex or narrow angle glaucoma[14]. Another survey was made in the Solomon Islands on a population having little or no exposure to Western culture[15]. Again, the results of this project emphasized the relative rarity of chronic and degenerative eye diseases among this group. Refractive errors in this study were found to be almost non-existant as were any form of severe ocular disease. The conclusion was made that "as population groups become more acculturated, one might expect that, unlike the many years usually necessary for genetic changes produced by natural selection, biologic characteristics associated with a change in environment would manifest themselves in a relatively short period of time." The striking increase in the incidence of myopia in highly civilized cultures was cited as a prime example.

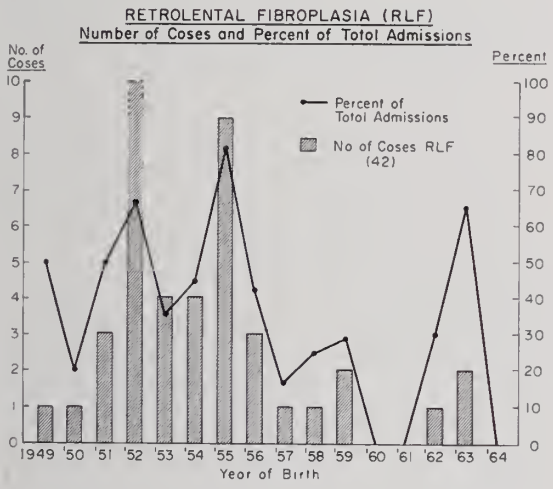


FIG. 3 Blindness due to RLF.

The authors make the following conclusion: "It is hoped that insight into the relative influence of hereditary and environmental factors in the production of ocular characteristics can be gained by future investigations"[15]. Another study[16] performed on a population of Australian Aboriginals discovered marked differences in the bacteriology and external diseases of these tribes compared with other areas of the country. Congenital ocular defects were not found in that group.

An interesting contrast was the report of the etiology of blindness in Nigerian children by Olurin[17]. Whereas most surveys, including our own, show that the most common causes of

TABLE III

Ophthalmic Diagnoses (100 Cases) of Blindness

	No.
Retinopathy of Prematurity	42
Retinal and Pigment Epithelial Defects	16
Tapeto-retinal and "Congenital Amaurosis" (7)	
Macular Degeneration (3)	
Cerebroretinal Degeneration (3)	
Ocular or Partial Albinism (2)	
Generalized Albinism (1)	
Optic Atrophy	9
Cause Unknown (several cases could be classified under Retina: Congenital Amaurosis) (6)	
Hydrocephalus (1)	
Craniopharyngioma (1)	
Optic Chiasm Glioma (1)	
Congenital Cataracts	8
Anophthalmos-Microphthalmos	4
Uveitis	4
Aniridia Syndrome	4
Congenital Glaucoma	3
Phthisis, Etiology Unknown	3
Retinoblastoma	2
Congenital High Myopia with Retinal Detachment	2
Trauma	2
Stevens-Johnson Syndrome	1

blindness in children are now congenital and developmental abnormalities, the Nigerian studies show that a large proportion of children there are still blinded by infectious and other preventable causes. Again, this would stress the importance of environment in relationship to ocular disorders.

It was the original impression of the investigators on this project that the geographic area of Kentucky was a suitable field for studying the problem of genetics in present day ophthalmology. We feel that our preliminary data continues to support this concept. We have attempted to establish a systemic method of studying the scope of this problem, not only with regard to the unusual cases, but in the magnitude and breadth of the field as it relates to the general operation of pediatric ophthalmology clinics.

It has become evident from the material accumulated that familial factors are of wide-ranging importance in present day ophthalmic practice. As improvements in ophthalmology continue to be made in the field of infectious disease, trauma, and surgical diseases, more attention will be directed to the remaining problems which are genetically determined. Changes in environment also seem to relate to the evolutionary nature of alterations in eye disease and disability. The data in this study support the need for continuing research into the in-

creasing incidence of genetic ocular disease and the area of genetic counseling.

The present study documents the significant influence of hereditary defects not only in blindness, but in conditions of partial visual disability and in cosmetic defects. The simple need for a visit to the ophthalmologist, even for correctable refractive errors, seems to relate increasingly to genetic and environmental factors.

The present research project has provided a prototype for an interview and data retrieval system to assess the role of familial factors in ophthalmic practice. We hope this will be a stimulus for more extensive and sophisticated studies of this nature. It has been a consistent observation from those either working directly with this project or those coming into contact with it, that the research unit has increased the awareness of ophthalmology residents and allied practitioners of the enormous influences of heredity in ophthalmology.

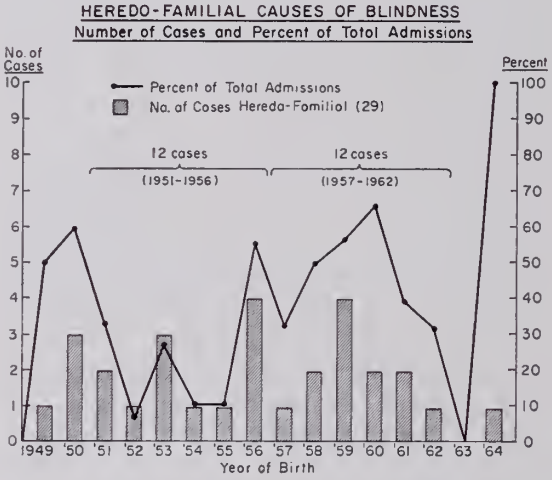


FIG. 4 Heredo-familial cases of blindness.

Summary

A statistical analysis has been made of 1,266 patients referred to an ophthalmic teaching center because of suspicion of eye disease or disability. The patient's ophthalmic and genetic data thus obtained was analyzed by means of a questionnaire which was directed towards eliciting information concerning genetic and familial factors in each case. Data recording and retrieval was by computer analysis.

The results of the study indicate that familial and genetic factors are of major importance not only in unusual ocular diseases and defects, but in the overall scope and breadth of problems now presenting to the practicing ophthalmologist. Genetic factors were found to be of major significance in legal blindness, partial visual disability, and significant cosmetic defects occurring about the eye and adnexa.

The data retrieval system provides a means to analyze the incidence and type of eye diseases occurring in a specific geographic area. The study indicates the continuing need for research into genetics and opthalmology and the necessity for providing further data which must underlie improvements in treatment and counseling for the problems that will face the ophthalmologist in the future.

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Ethylene Glycol Poisoning: Report of Three Cases

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The authors present three fatal cases of ethylene glycol (anti-freeze) intoxication seen at the University of Kentucky Medical Center since 1963. The metabolism and toxicology of EG are reviewed and the importance of early diagnosis and treatment is emphasized.

ALTHOUGH ethylene glycol (EG) intoxication is uncommon in the United States, its high toxicity is responsible for 40-60 deaths each year in this country[1].

Since 1963 three cases of EG poisoning, all of which were fatal, have been seen at the University of Kentucky Medical Center. Inquiry to the Vital Statistics Section, State Department of Public Health, has revealed three additional fatalities from EG poisoning in Kentucky since 1965.

Case Presentation

Case 1. W. F., an 80-year-old male, ingested two glasses of a liquid later identified as ethylene glycol. The following day the patient became confused, anorexic and his wife noticed that he had not passed urine. His private physician suspected a stroke. As his condition did not improve, one week after ingestion he was referred to UKMC on May 3, 1963. On admission, physical examination revealed an incoherent, hyperventilating, elderly male. BP - 156/78 mm Hg, P - 84/min, R - 20/min, T - 98.6°F. Examination of heart, lungs and abdomen was normal. Skin had diminished turgor. Neurologic examination revealed pupils to be of equal size and reactive to light. The fundi were unremarkable. Reflexes were normal in the upper extremities and hypoactive in the lower limbs. LAB DATA: Hgb - 13.5 gm/100 ml, Hct - 38%, WBC - 4200/cu mm, BUN - 175 mg/100 ml, Na - 137, Cl - 93, K - 5.2, CO_2 - 12, Ca - 3.4 (mEq/1) and P - 10.5 mg/100 ml.

The patient was rehydrated with intravenous fluids and acidosis was corrected with sodium bicarbonate. Due to anuria and uremia, hemodialysis was performed on the second day. On the third day the patient had a grand-mal seizure and was started on Dilantin. Because of technical problems with hemodialysis and persistent anuria, peritoneal dialysis was started on the fifteenth day and was continued for four days. His condition slowly deteriorated, however, and the patient expired on May 29, 1963. Post mortem examination revealed tubular necrosis and oxalate crystals in the kidneys, the classical pathologic findings of EG intoxication. (FIG. 1)

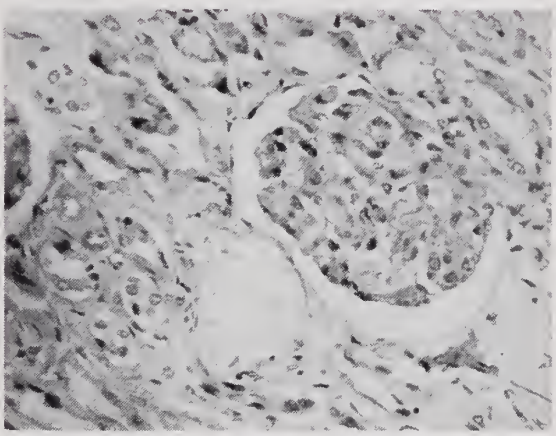


FIG. 1 Renal tissue (obtained at autopsy) in Case 1 demonstrating acute necrosis. Note the oxalate crystals at 12 and 7 o'clock positions near the glomerulus.

Case 2. W. W., a 55-year-old male, was found comatose in his house on August 26, 1970. On arrival to the hospital the patient was agitated and incoherent. BP - 148/100 mm Hg, P - 100/min, R - 22/min, T - 100.6°F. Examination of the chest revealed bilateral basilar rales. The heart was normal. There was voluntary guarding of the abdomen and the liver was palpable 10 cm below the right costal margin. Neurologic examination revealed normally reactive pupils of equal size. With the

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exception of hypoactive biceps reflex, deep tendon reflexes were absent. LAB DATA: Hgb - 14.4 gm/100 ml, Hct - 43%, WBC - 17.300/cu mm with a shift to the left, BUN - 71 mg/100 ml, creatinine - 7.6 mg/100 ml, Na - 147, Cl - 112, K - 5.2, CO_2 - 17, Ca - 4.3 (mEq/l), P - 6.1 mg/100 ml, arterial pH, 7.32, PaO_2 - 67 mm Hg, $PaCo_2$ - 30.4 mm Hg. Severe oliguria was present.

The patient was treated with fluids, sodium bicarbonate and 200 mg of furosemide intravenously without diuresis. The following day the patient was still agitated although more cooperative. Retrograde pyelogram showed no obstruction. Because of rising BUN and oliguria, peritoneal dialysis was begun on the second day but was later discontinued for technical reasons. On the fifth day the patient was started on hemodialysis. Fifteen minutes after dialysis had begun the patient had a cardiac arrest and expired. Autopsy was not performed.

Subsequent information obtained from neighbors revealed that both he and the following patient had been drinking homemade wine on the day prior to admission. Further investigation revealed the presence of ethylene glycol in this liquid.

Case 3. W. C. L., a middle-aged male, was found comatose in his friend's house (Case 2). He was brought to the emergency room at the UKMC and found to be unresponsive. BP - 90/60 mm Hg, P - 110/min, R - 26/min, T - 100°F. Examination revealed decreased sounds in both lung bases. The heart was normal. The liver was palpable 4 cm below the right costal margin. Neurologic examination revealed pupils to be equal, small, reactive to light. The fundi were normal. Deep tendon reflexes were normal. LAB DATA: Hgb - 10.2 gm/100 ml, Hct - 32.5%, WBC - 6800/cu mm, Na - 143, Cl - 102, K - 4.5, CO_2 - 5 (mEg/1), arterial pH - 6.95, PaO_2 - 101 mm Hg, $PaCO_2$ - 25 mm Hg. He received intravenous fluids, sodium bicarbonate, ethanol (30 cc every four hours per NG tube) and dexamethasone (3 mg every four hours IM).

While being examined the patient had generalized seizures which were treated with intravenous diazepam and pentobarbital. Oliguria was present upon admission to the hospital. On the third day peritoneal dialysis was started and continued throughout hospitalization. His mental status showed slight improvement but tracheostomy had to be performed to allow adequate ventilation and clearing of bronchial secretions. On the tenth day he became septic and cultures from multiple sites revealed Pseudomonas aeruginosa. Carbenicillin was added to the stock solution of the peritoneal dialysate and gentamycin (80 mg daily) was administered but the patient expired in bacteremic shock on the eighteenth day.

Comments

Ethylene glycol, synthesized more than 100 years ago, became extremely useful during World War I as a solvent and antifreeze due to the shortage of glycerol. Although initially thought to be non-toxic to man,[2, 3, 4] in 1932 Hunt, extrapolating from animal studies, estimated a human lethal dose of 100 ml[5]. Several reports later confirmed this fact although there have been fatal cases with smaller doses and survivals with much larger amounts[6, 7].

The clinical picture of EG intoxication has been divided in three phases[8]:

1. Involvement of CNS: develops within 30 minutes to 12 hours and is characterized by nausea, vomiting, convulsions, coma, and frequent death;

2. Cardiopulmonary signs developing within 12 to 24 hours: tachycardia, cyanosis, pulmonary edema, and death;

3. Renal failure: if the patient survives phases 1 and 2 he goes into a period of acute tubular necrosis which also carries a very high mortality.

The rapid onset of the neurologic symptoms suggests a direct effect of EG and acidosis[9]. The mechanisms of the cardiopulmonary signs have not been well explained.

Several animal studies and case reports indicate that EG is not nephrotoxic and that the renal failure seems to be precipitated by some of its metabolites and not by obstruction of the tubules with oxalate crystals as intially described[10, 11]. Gessner[12] in 1963 showed that the enzyme, alcohol dehydrogenase, was responsible for the oxidation of EG to oxalic acid (2-3%) and CO_2 although part of it was excreted unchanged in the urine. It has also been shown that ethanol, a more specific substrate to the enzyme, prevented the oxidation of EG and decreased the mortality in experi-

mental animals[10, 13]. Ethanol has been used with some success in EG poisoning in man[14] and a dose of up to 8-10 gm ethanol every hour has been recommended in order to decrease the conversion of EG to its more toxic metabolites[15]. Our current policy is to administer ethanol (50 gm in one liter of 5% G/W) at the rate of 100 to 200 ml per hour as tolerated.

In 1959 Schreiner[16] reported the first case of EG poisoning treated with hemodialysis. The most dramatic response to this treatment was presented by Pendras[17] in 1963 when a patient was dialyzed for 75 hours with full recovery. Large amounts of EG were obtained in the dialysate and hemodialysis was also highly effective in monkeys given EG. Although some cases treated with late peritoneal and hemodialysis have recovered[18, 19] the chances of survival increase with early treatment.

The diagnosis of EG intoxication should be suspected in all patients presenting with the rapid onset of coma or convulsions, severe metabolic acidosis and oliguria. Urinalysis may suggest the diagnosis if large amounts of oxalate crystals are present in the sediment. If history and early clinical investigations do not exclude the possibility of EG poisoning, referral for hemodialysis should be done promptly. Diagnosis can be later confirmed by gas chromatographic analysis of the ingested fluid or the patient's blood by the State Toxicology Laboratory (275 East Main Street, Frankfort, Kentucky).

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Medical Aspects of Glass Fiber Exposure

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The extensive use of glass fiber assures that nearly everyone will at some time in his life come in contact with it. The dermatological and respiratory problems associated with glass fiber are reviewed.

GLASS in various forms has been used by man for more than 4,000 years. One of its newest forms is fiber glass. Glass fiber was first produced commercially in 1938[1]. Since that time many refinements have been made in the glass itself as well as in its uses.

Glass fibers are not unlike textile fibers in that they are usually formed in continuous filaments of various diameters. These fibers may range from approximately 3-100 u in diameter. Human hair ranges from approximately 16 to 180 u in diameter[2].

Various binders, lubricants and coupling agents are used to bind the individual fibers together, to protect the surface of each fiber and to serve as bonding agents if the fibers are to be incorporated into other materials.

Like all common forms of glass, glass fiber is chemically inert. It is resistant to flame, moisture and corrosion. It is resilient and flexible. Its thermal and acoustical insulating qualities are well known.

These valuable properties have led to its use in building materials, manufactured products and textiles.

Its use in the home includes furnace filters, duct and pipe insulators, ceiling and wall insulation, curtains and draperies, furniture upholstery and mattress ticking, just to mention a few.

Considering the extensive use of glass fibers today, nearly everyone is at some time a candidate for exposure.

There have been numerous investigations of plants and workers engaged in the production and handling of glass fibers[3, 4, 5]. The reactions of these workers to glass fibers have been variable; the degree of response varies with changes in room temperature, humidity and type of clothing worn.

The most commonly encountered problem is a superficial, transitory cutaneous irritation and pruritus. Punctiform erythema appears promptly after contact with glass fibers and usually clears when the exposure is discontinued. However, it is not rare for erythema to last several days. Studies have demonstrated that the reaction is due strictly to mechanical irritation and is localized in the stratum corneum layer of the skin[6]. The pruritus increases with perspiration and rubbing usually ceases before the erythema disappears completely. Exposed areas of the skin are most commonly involved; however, glass fibers can penetrate the fabric of clothing and cause irritation.

A number of studies have been published which discuss the effects of glass fibers upon the lungs[3, 5, 7]. These studies seem to indicate that inhalation of glass fibers is unlikely to produce permanent lung changes. However, respiratory tract irritation characterized by one or more of the following—bronchitis, rhinitis, sinusitis pharyngitis and/or laryngitis—has been reported[3]. These cases involved primarily individuals who worked directly with glass fibers; however, the authors conclude that working with the material is by no means the sole criterion of exposure.

Murphy reported a case involving an electrical worker who developed hemorrhagic bronchiolitis after exposure to glass fibers[7]. Pulmonary pathology consisted of multiple focal abscesses arising from terminal bronchi and bronchioles which contained minute glass fiber particles. The condition was relieved following termination of exposure to glass fibers. The man has been asymptomatic for three and one-half years.

Wright found no unusual pattern of radiologic densities in the chest films of more than a thousand workers with 10 to 25 years of exposure in an environment containing airborne particles of glass fibers[8]. He also noted

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that the frequency of various radiologic appearances known to occur in the general population was no higher in those with greatest exposure than in those with the least.

Atmospheric surveys of glass fiber manufacturing plants show that only six percent of all airborne fibers are less than 20 u in length and only 40 percent are less than 100 u in length. Most airborne glass fibers are therefore too large to enter the alveoli—being more than 4 u in length[1].

Many investigators feel that airborne glass fibers present no lower respiratory hazard, but they do indicate that glass fibers are fully capable of causing symptomatic respiratory irritation[3, 7, 8].

The diagnosis of glass fiber respiratory irritation is difficult to make as the symptoms may be characteristic of many respiratory irritants. There is no characteristic x-ray picture[8] and the glass fibers themselves are often difficult to demonstrate[7]. At present, a careful history appears to be the best clue.

Certainly more information is needed, particularly concerning non-occupational exposures.

Treatment should be symptomatic with full recovery following removal of the individual from exposure.

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Medical Progress

Female Infertility

MARVIN A. YUSSMAN, M.D.*

APPROXIMATELY 15% of all marriages in the United States are involuntarily barren. This amounts to 7,500,000 couples who are deprived of the privilege of parenthood. Although the major emphasis in reproductive medicine is quite rightly focused on the monumental problem of overpopulation and birth control, physicians must also direct their skills toward assisting the infertile couple to achieve what, for many, constitutes the culmination of their marriage and their gender role.

Though two childless years of marriage is an accepted and reasonable prerequisite for an infertility investigation, this guideline should not be considered inviolate. The rule is based on the knowledge that there is an increasing pregnancy rate associated with increasing length of marriage, reaching a plateau of around 85% after the second year of marriage. However, there is a compensating physiologic decline in fertility with advancing age, beginning around age 27 in the female. This decreasing fertility potential after age 27 is more significant than the increasing pregnancy rate associated with prolonged coital exposure. It is wise, therefore, not to delay investigation of patients past age 27. Needless to say, such investigation should not be postponed when the initial consultation elicits a history of sexual difficulty, or suspicion of genetic, developmental or endocrinologic abnormality. The initial investigation must include the husband as well as the wife, inasmuch as 30% to 50% of infertility is secondary to male factors. The early contact with the husband gives the physician not only the opportunity to diagnose physical abnormalities, but also the opportunity to discuss sexual, marital and parental attitudes.

Among the essential points of the detailed history, one should determine the timing and frequency of intercourse. Though it is frequently assumed that patients know that midcycle coitus is most likely to result in pregnancy, such knowledge is not universal. In a frantic attempt to combat their infertility, couples may have intercourse at olympian frequency, or may "save up" for distressing lengths of time prior to the midcycle. Both of these extremes lead to poor semen quality and should be discouraged. A detailed menstrual history will not only disclose the irregular menstruation associated with anovulatory cycling, but also direct attention to other possible causes for the infertility—as corpus luteum deficiency presenting with premenstrual staining, or endometrial polyps, adenomyosis, leiomyomata and hypothyroidism presenting with hypermenorrhea. The initial consultation should also be utilized to instruct the wife in the recording of basal body temperature. This recording is useful for the physician in determining ovulation and the timing of various tests, and also useful for the patient as an aid in understanding her ovulatory and menstrual processes.

A normal semenanalysis on the husband should be obtained before initiating more distressing and costly diagnostic procedures on the wife. It is important to approach these diagnostic procedures in a complete and systematic manner. The first of these should be an endometrial biopsy obtained on the first day of the menstrual flow. The histologic pattern of the endometrium is used to confirm ovulation and also to diagnose the secretory lag associated with corpus luteum deficiency. The biopsy may be obtained on the 20th day of the cycle in order to more accurately assess this corpus

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luteum deficiency, though this risks the interruption of an early gestation.

The combination of a postcoital test and CO_2 insufflation (Sims-Huhner-Rubin test) should be performed next. This combined procedure should be performed immediately prior to ovulation. The failure of the cervical mucus to demonstrate good spinnbarkeit or arborization at this preovulatory time indicates deficiency of midcycle estrogens. The failure to demonstrate viable sperm in the presence of well estrogenized cervical mucus indicates an abnormality of the husband's ejaculate, mechanical interference (as the use of a spermicidal lubricant or douche), or the presence of factors in the cervical mucus hostile to sperm survival, such as sperm agglutinating antibodies.

The number of viable sperm per high power field required to constitute a normal postcoital test is the subject of unresolved debate. Many experts accept "any" viable sperm as an indication of an acceptable test. More recent work has shown that less than 20 sperm per high power field is associated with a statistically significant increase in infertility. Since many gynecologists are convinced that pregnancies may result from the CO_2 insufflation performed under the proper conditions, it is advisable to await the menstrual flow following this procedure before scheduling further tests.

A hysterosalpingogram should be performed at the next midcycle. This procedure not only confirms abnormalities suspected by CO_2 insufflation, but also demonstrates intrauterine abnormalities and unilateral tubal disease.

Sperm agglutinating and sperm immobilizing antibodies should be determined in couples demonstrating abnormal postcoital tests. Since such antibodies may not manifest in the cervical mucus but still be present elsewhere in the genital tract, these titres should also be determined in couples for whom no other cause for infertility can be established.

A detailed endocrinologic laboratory investigation is rarely indicated. The measurement of total gonadotrophins and their steroid response is useful prior to attempting induction of ovulation with Clomiphene citrate or human menopausal gonadotrophins, though this only confirms the findings which should be evident by physical examination of cervical mucus and vaginal cytology. An extensive endocrinologic evaluation is likely to be productive only in those cases presenting with amenorrhea or those with definite physical findings compatible with an endocrinopathy.

No infertility investigation should be abandoned until the patient has undergone one of the two available pelvic endoscopic procedures. Though culdoscopy has long been the standard method of visualizing the pelvic structures, the newer procedure of laparoscopy seems to have found increasing favor among gynecologists. Laparoscopy is accomplished by insufflating the peritoneal cavity with CO_2, following which a fibreoptic endoscope is introduced into the peritoneal cavity immediately below the umbilicus. This relatively safe procedure usually allows excellent visualization of the pelvic viscera. In approximately 20% of asymptomatic patients, significant pelvic pathology can be uncovered. Minor operative procedures such as biopsy and lysis of adhesions can be accomplished via laparoscopy. The "fertility laparotomy" has generally been replaced by endoscopic examination.

Preliminary therapy in infertility consists of instruction. Couples should be informed that the most advantageous balance between sperm concentration and sperm motility can be achieved with a coital frequency of two to three exposures weekly, and that the most opportune time for conception is the midcycle. Vaginitis, vulvitis or cervicitis is thoroughly treated. Urologic consultation is obtained on husbands demonstrating poor semen characteristics.

If azospermia or severe oligospermia is considered irreversible, artificial insemination procedures are discussed. Husband insemination is rarely indicated, though sperm concentrating and banking procedures offer increased hope for this procedure. The sperm from several individually poor semen specimens may be separately processed, frozen and stored at —320° F in a liquid nitrogen freezer. When thawed and combined, the total number of sperm may be adequate for fertilization. Clinical experience with this procedure has not been encouraging, though successful pregnancies have been achieved. To date, the process has not been useful for individuals whose sperm concentrations have been below 5 million/cc. When the husband is totally azospermic, donor

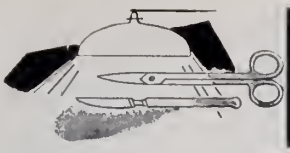
insemination may be considered as an available alternative to adoption.

There are several hormonal approaches to infertility. Twenty to 50 micrograms of ethinyl estradiol may be substituted at the midcycle in those individuals who demonstrate inadequate estrogenation of cervical mucus. If given after the 10th day of the cycle, it usually will not interfere with ovulation. Corpus luteum deficiency may be corrected by administering progesterone during the luteal phase of the cycle. Total ovulatory suppression for six to nine months, using one of the available combination birth control pills, may be used as an acceptable alternative to the conservative surgical management of endometriosis. Clomiphene citrate, administered as 100 mg daily for five consecutive days to anovulatory individuals with measurable gonadotrophin excretion, can be expected to induce ovulation in approximately 60% of patients.

There is some concern about the accuracy of this ovulation rate, inasmuch as the methods of verifying ovulation are generally presumptive. The 27% to 34% pregnancy rate using clomiphene reinforces this concern. In patients who fail to respond to the standard clomiphene regimen, several additional days of therapy may be attempted. Approximately 15% of clomiphene failure patients may be expected to respond to this extended regimen. For those individuals who fail to respond to the extended regimen, 10,000 IU of human chorionic gonadotrophin may be injected four to five days after the last clomiphene tablet. This is an attempt to recreate the mid-cycle surge of LH which normally triggers ovulation. This may also be expected to increase clomiphene's efficiency by approximately 15%.

For those anovulatory individuals with no measurable gonadotrophin excretion, or who fail to respond to the various clomiphene regimens, induction of ovulation may be attempted using human menopausal gonadotrophin (HMG) in combination with human chorionic gonadotrophin (HCG). The commercially available preparation is a human urinary extract containing 75 IU of follicle stimulating hormone (FSH) and 75 IU of luteinizing hormone (LH). Inasmuch as the use of this preparation may be expected to result in a multiple pregnancy rate of approximately 25%, or in rather severe ovarian hyperstimulation, its use is best left to those individuals with facilities available to monitor its ovarian steriod excretion response. With proper monitoring, ovulation has been reported in 92% of patients and pregnancy in over 50% of patients.

With proper diagnosis and therapy it should be possible to reverse female infertility in approximately 70% of cases.



GRAND ROUNDS



The University of Louisville School of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

The Nephrotic Syndrome

THE nephrotic syndrome is an easily recognizable clinical entity. Precise information concerning the etiology for this syndrome is often lacking and effective therapeutic programs are sometimes difficult to establish.

Case Presentation

A 14-year-old boy was admitted to the hospital because of swelling around his eyes and of his hands of four days duration. He gained approximately 25 lbs. during the four to six weeks prior to admission, a weight gain his family attributed to growth. He'd had an ear infection approximately one month prior to admission and gave a history of a convulsive disorder of three years duration for which he was taking Dilantin, Mebaral and Mysoline and he had been started on Tridione approximately three months prior to admission. He had no symptoms referrable to the genito-urinary tract and his family history and review of systems were non-contributory.

Physical examination revealed a well developed, well nourished 14-year-old male with obvious periorbital edema and bilateral hand edema. His weight was 167 lbs., blood pressure 168/100 mm Hg and his pulse, temperature and respirations were normal. Aside from these observations and an acneform eruption about the face and upper trunk, the physical examination was completely normal.

Urinalysis on admission gave a 4+ reaction for protein, but was otherwise normal. The hemoglobin (Hgb) was 19.2 gm/100 ml, hematocrit 57%, white blood cell (WBC) count 5,800/cu mm with a normal differential count and platelets were adequate in number. The blood urea nitrogen (BUN) was 12 mg/100 ml, serum creatinine (Cr) 0.9 mg/100 ml, and fasting blood glucose 80 mg/100 ml. The total serum protein was 4.7 gm/100 ml and serum albumin 1.9 gm/100 ml. The serum protein electrophoresis was essentially normal. The serum cholesterol was 408 mg/100 ml and the serum complement was 34% (normal 36-52%). Antistreptolysin-O titers, lupus erythematosis cell preparations and anti-nuclear antibody tests were negative. A 24-hour urine was found to contain 43 gm of protein and the creatinine clearance was 60 ml/min. Urinary protein electrophoresis revealed albumin comprising virtually the total protein lost. The chest x-ray was normal.

Hospital Course

During the first five days of hospitalization, the patient was placed on a diet consisting of 60-90 gm of protein, 500 mg sodium, and 1900 mg of potassium. Fluids were restricted to less than 800 cc/day. Two episodes of hyperkalemia developed which were treated with Kayexalate. On the fifth hospital day, the patient was started on Prednisone, 50 mg/day, as well as antacids and he began to diurese. During the next few days his serum uric acid rose to 18 mg/100 ml and he was started on Allopurinol, 100 mg q.i.d., and later Benemid, 250 mg b.i.d. was added.

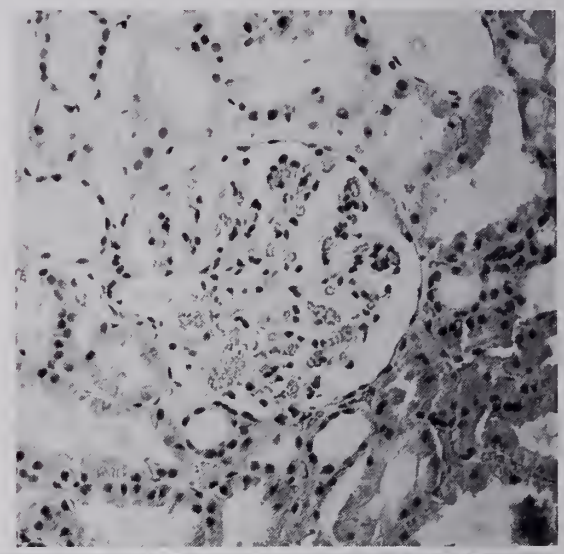
An intravenous pyelogram was obtained and revealed the left kidney to be 1.5 cm larger than the right, but was otherwise normal. On the 15th hospital day, a percutaneous renal biopsy was obtained. (Fig. 1) During this hospitalization, the patient developed a right pleural effusion which was treated by administering salt poor albumin and diuretics. His

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BUN rose to 177 mg/100 ml, Cr to 4.3 mg/100 ml, and his creatinine clearance fell to 10 ml/min. Urinalysis revealed 4+ protein and many WBC's and hyaline and granular casts. The Prednisone was increased to 90 mg/day and the patient was discharged home on the 30th hospital day to be readmitted four days later.

On the day of his second admission, he was very lethargic. His weight was 148 lbs. and blood pressure 160/100 mm Hg. The acneform eruption was still present. Examination of the heart revealed a regular rhythm with an intermittent mid-diastolic extra sound. There was minimal dullness to percussion and diminution in breath sounds at the right lung base and a small amount of ascitic fluid was present. The lower extremities were edematous.

Urinalysis revealed a 3+ reaction for protein and many WBC's were present in the urinary sediment as well as a moderate number of bacteria. Urine culture revealed 10,000 colonies/cu cm of coagulase negative staphylococci. The Hgb on admission was 16.8 gm/100 ml and WBC count 18,000/cu mm with 97% polymorphonuclear leukocytes. The serum chloride was 75 mEq/L, CO_2 content 27 mEq/L, K-4.5 mEq/L and Na-120 mEq/L. The blood glucose was 160 mg/100 ml,



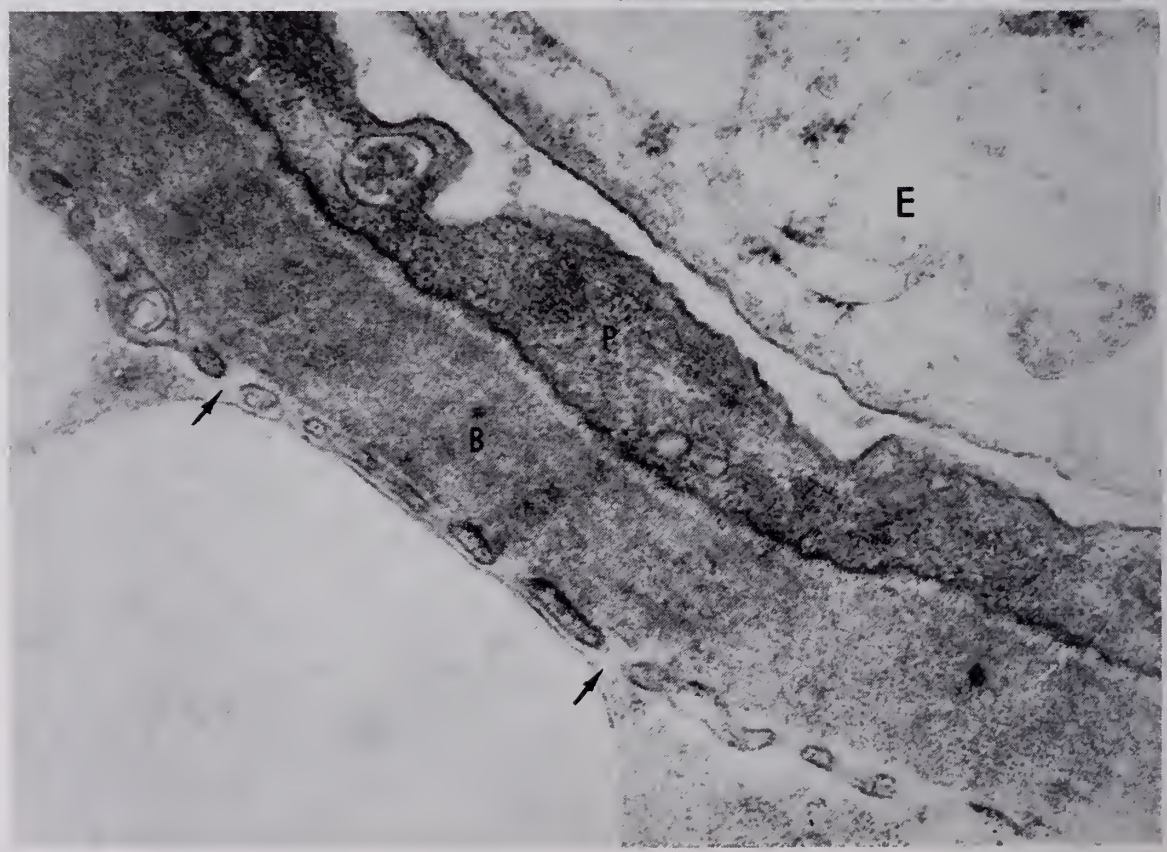


FIGURE 1

A. Renal biopsy showing modest glomerular proliferative changes with some adhesions between the glomerular capillary tufts and Bowman's capsule.

B. Electron microscope photomicrograph of glomerular membrane. Arrows indicate fenestrae of capillary endothelium. B—basement membrane, P—fused foot processes, E—portion of an epithelial cell. Magnification 40,000 X. (Courtesy of Dr. G. Randolph Schrodt, Department of Pathology, University of Louisville)

BUN-204 mg/100 ml, CR-4.8 mg/100 ml, serum albumin 1.3 gm/100 ml, and the uric acid was 8.8 mg/100 ml. A 24-hour urine specimen with a total volume of 557 ml contained 6.7 gm of protein and the creatinine clearance was 6.2 ml/min. A chest x-ray demonstrated a right pleural effusion. Three blood cultures were obtained and showed no growth at 48 hours. A barbiturate level was obtained and found to be 10.5 mg/100 ml. Mebaral was discontinued.

On the second hospital day, the patient complained of pain on the left side of the abdomen and some guarding on palpation was demonstrated. A serum amylase and lipase were obtained and found to be 832 (normal= 50-110) and 8.6 (normal=0.5-1.5) international units respectively. The abdominal pain subsided after 24 hours of observation.

The patient was given four units of salt poor albumin, did not diurese, and developed congestive heart failure. He subsequently diuresed following the administration of a large dose of intravenous diuretic. Fluids were restricted to 600 ml/day and electrolytes gradually returned to normal levels.

On the third hospital day, the patient complained of dysuria and frequency and a urinalysis revealed many WBC's and bacteria, as well as some granular casts. He was started on Ampicillin 500 mg q.i.d. On this date and for the subsequent four days the patient received 150 mg of Cytoxan per day orally. At the time this medication was started, his WBC count was 19,000 cu mm and Hgb 14.2 gm/ 100 ml. Recurrent pleural effusions were demonstrated and treated throughout his hospitalization.

On the ninth hospital day, the creatinine clearance was 3.2 ml/min., and the 24-hour urine specimen contained 5.2 gm of protein. His BUN had risen to 240 mg/100 ml. A renal vein catheterization study was undertaken which demonstrated a patent renal vein on the left side. The right renal vein could not be catheterized. Following this procedure, the patient developed gross hematuria. His prothrombin time was 14.9 seconds (control 12.1 seconds). Peritoneal dialysis was started which was effective in lowering the BUN though bleeding occurred at the abdominal puncture site and continued at the site of femoral puncture. Intravenous vitamin K was given.

On the 10th hospital day the patient was more alert. His hemoglobin was 10.2 gm/100 ml; WBC count 5,500 cu mm; platelet count 78,000 cu mm; and serum albumin 1.4 gm/100 ml. Four units of buffy-coat free packed cells were given. Bleeding continued from the femoral and abdominal puncture sites and was later controlled by appropriate suturing.

During the following days the patient was given salt poor albumin and buffy-coat poor packed cells. He developed posterior nasopharyngeal bleeding and bilateral consolidation in his chest. He was given Keflin and after a culture of material obtained by nasopharyngeal suctioning was obtained and sensitivities determined, he was started on Gentamycin in a modified dose of 60 mgm q.o.d.

Complete blood coagulation studies revealed only minor abnormalities of a non-specific nature. A bone marrow biopsy revealed a hypocellular, fatty marrow which was negative upon culture. His WBC count and platelet count dropped daily to a low of 150 WBC's and 20,000 platelets per cu mm and buffy-coat free packed cells and platelets were administered. A second peritoneal dialysis was started several days before his death, and was effective in correcting the electrolyte abnormalities, and in lowering the BUN. The patient expired during the second of two cardiac arrests, on the 48th day after referral.

Discussion

The nephrotic syndrome is the result of kidney diseases in which large amounts of protein, primarily albumin, are excreted into the urine. Such protein losses usually exceed 3.5 gm/day. In addition, patients with this syndrome usually have a low serum albumin, elevated serum cholesterol and show some evidence of edema. This patient had each of these manifestations and was one of the most therapeutically unresponsive patients with nephrotic syndrome to be observed by the author. While several etiologies for the nephrotic syndrome were considered, namely glomerulonephritis, drugs, lupus erythematosus and renal vein thrombosis; renal biopsy, drug withdrawal, laboratory and radiologic examinations all failed to provide a definitive diagnosis.

Glomerular disease has been reported to follow infections[1], such as, in pneumococcal pneumonia, subacute bacterial endocarditis, septicemia, and syphilis, to name but a few.

The patient did have an ear infection about one month prior to the development of nephrotic syndrome though there was no history of a pharyngitis at that time and acute post-streptococcal glomerulonephritis is not a common cause of nephrotic syndrome.

Drugs, such as Trimethadione, which he had starting receiving several months prior to his illness, have been implicated in the development of nephrotic syndrome[2] though discontinuation of drug therapy usually results in prompt remission of the disease.

Lupus erythematosus, while uncommon in the young male, is also a cause of nephrotic syndrome[3] and is occasionally associated with a severe leukopenia and thrombocytopenia[4].

In addition, renal vein thrombosis may cause nephrotic syndrome[5] and, not infrequently, occurs in a patient with an elevated hemoglobin and hematocrit. None of these etiologies, as well as several others not specifically mentioned, could be documented either during the patient's hospitalization or at postmortem examination. A summary of known etiologies for the nephrotic syndrome and selected examples of each is shown in Table I.

A modest proliferative glomerular lesion was demonstrated on light microscopy and foot process fusion was observed on electronmicroscopy of the renal biopsy specimen. After a brief trial of steroids and a continued downhill course, Cyclophosphamide was administered according to the recommended therapeutic regimen of Black who reported that in young patients with nephrotic syndrome and "minimal change disease" on renal biopsy, where steroids alone are not an effective form of treatment, the addition of Cyclophosphamide may bring about a remission and in addition reduce the subsequent incidence of relapses[6]. The success rate for this form of treatment in young nephrotic patients with "minimal change disease" of glomerulonephritis is reported to be very high. This is particularly true when a highly selective protein loss occurs and it may be argued that one does not usually find a selective protein loss except in patients with "minimal change disease."

This patient did not have "minimal change disease." The diagnosis for this requires normal glomeruli on light microscopy and changes in the basement membrane and foot processes on electron microscopy. However, Black, recommends that young patients (less than 40 years of age) with nephrotic syndrome and membranous or proliferative changes on light microscopy be considered for treatment in a similar manner as those with "minimal change disease" provided that their diastolic blood pressure is less than 100 mm Hg. Older patients and those with elevated blood pressures frequently experience complications when treated with high doses of steroids.

Several complications which this patient experienced are worthy of special mention. Peripheral edema, ascites and pleural effusions are common in the hypoalbuminemic patient. Indeed, ascites and pleural effusions frequently occur when the serum albumin drops below 1.6 gm/100 ml. Hypoalbuminemia occurs when the urinary excretion and catabolism of albumin exceed its production by the liver. Urinary losses of albumin alone do not account for the hypoalbuminemic state[7] in nephrotic syndrome and the kidney may be an important site for albumin destruction[8]. Treatment consists of replacing the building blocks for albumin synthesis via the diet and/or the administration of albumin itself intravenously. The latter course is rarely successful when the de-

TABLE 1

A Classification Of Etiologies For Nephrotic Syndrome With Some Examples

CLASSIFICATION	EXAMPLE
Primary renal diseases	Idiopathic glomerulonephritis (Membranous, proliferative, etc.)
Metabolic diseases	Diabetic glomerulosclerosis, Amyloidosis
Collagen diseases	Systemic lupus erythematosis
Malignant diseases	Hodgkins disease, Carcinomas
Hematologic diseases	Sickle cell anemia, Spherocytosis
Circulatory diseases	Renal vein thrombosis, Congestive heart failure
Nephrotoxins	Organo mercurial diuretics, Gold, Bismuth
Allergens	Bee stings, Poison oak and Ivy
Drugs	Trimethadione, Paramethadione, Penicillamine
Infections	Syphilis, Subacute bacterial endocarditis
Congenital	Congenital nephrotic syndrome
Hereditary nephritis	Hereditofamilial nephritis
Miscellaneous	Pregnancy, Transplantation

gree of proteinuria is large and may result in the development of congestive heart failure, as was the case on the one occasion here, when the patient was unable to excrete the increased intravascular volume which occurred due to an increase in intravascular osmotic pressure, which resulted from this form of therapy.

It is therefore imperative that the ability of the kidney to excrete a large volume of fluid be documented prior to the administration of serum albumin. This may be done by first challenging the patient with oral or intravenous diuretics. Whatever benefits may be derived by the administration of albumin are generally short-lived when the urinary excretion of albumin is great. In addition, this patient had a dilutional hyponatremia and hypochloremia which is best treated by fluid restriction.

Patients with nephrotic syndrome rarely present with an elevation of either BUN or serum creatinine. In this particular case the BUN did not rise until the patient was placed on a high protein diet and steroids were administered. The serum creatinine was never more than moderately elevated which further implicates the use of diet and steroids as the foundation for the elevated BUN. This was an expected consequence of the treatment, which along with electrolyte abnormalities and fluid excess, may be adequately treated by the institution of peritoneal dialysis. During the conduct of an effective peritoneal dialysis, fluid restriction may often be relaxed, dietary restrictions somewhat liberalized and fluids mobilized from the intercellular spaces back to the vascular compartment, by the intravenous administration of salt poor albumin, from which it is removed. In general, an acceptable, though sometimes short-lived, new equilibrium may be achieved while time is allowed for some glomerular healing to ensue.

The development of pneumonia in a patient who experiences pulmonary congestion and bilateral pleural effusions is not unusual. However, until recent years, the most frequent infectious complication of nephrotic syndrome in a young patient who develops ascites was pneumococcal peritonitis. Repetitive cultures of ascitic and peritoneal fluids were always negative.

The development of thrombocytopenia and leukopenia were not expected. While Cyclophosphamide does cause bone marrow depression, in the dose administered one would not have expected this to occur. When suppression does occur it is usually short-lived and the WBC count and platelet count promptly return to normal after cessation of therapy. This was not the case here, and one can only postulate that a hypersensitivity state comparable to that occasionally seen with chloramphenocol administration occurred in this patient or that the combined use of Cyclophosphamide and Allopurinol, a drug also known to produce bone marrow suppression, was a factor in the development of the leukopenia and thrombocytopenia which occurred. This is not the only possible explanation, however. Patients with systemic lupus erythematosus occasionally develop antibodies against white cells and platelets and rapidly diminish their populations. It was for this reason that leukocyte-poor packed cells were administered when blood transfusions were necessary, and why the administration of platelets was withheld until a very late date. It has been my observation that as few as 30,000 platelets in a non-uremic or adequately dialyzed patient are effective in controlling bleeding. The platelets of the uremic patient are, regardless of their numbers, ineffective in promoting coagulation but become adequately effective, once effective hemodialysis or peritoneal dialysis has been undertaken.

In this particular case, postmortem findings were not particularly informative. The renal pathology was essentially the same as that seen at the time of renal biopsy, and multiple system involvement indicative of lupus erythematosus could not be clearly identified. While treatment with Cyclophosphamide may have contributed to the ultimate outcome, this could not be documented, and steroid therapy alone had been followed by a progressive downhill course.

Anatomical Diagnoses

Focal proliferative glomerulonephritis; Patent renal veins; Cardiac hypertrophy and dilatation; Pleural effusions, pulmonary edema, and right lower lobe pneumonia; Urinary bladder and gastric mucosal hemorrhages; Chronic active pancreatitis; Bone marrow-cellular but with few megakaryocytes.

R. A. Schacht, *M.D., Assoc. Professor of Medicine*
(References listed on Page 491)

SPECIAL ARTICLES

The Development and Extensive Utilization of Self-Instructional Materials in Clinical Departments

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In 1912 in his book, *Education, A First Book,* E. L. Thorndike wrote "A human being should not be wasted in doing what forty sheets of paper or two phonographs can do. Just because personal teaching is precious and can do what books and apparatus cannot, it should be saved for its peculiar work. The best teacher uses books and appliances as well as his own insight, sympathy, and magnetism." With this quotation in mind, the College of Medicine of the University of Kentucky is undertaking a project designed to promote the development and extensive utilization of self-instructional programs. Specifically, study carrels equipped with various audio-visual media have been placed in clinical departments for student use. The clinical faculties will develop, refine, and evaluate appropriate programs for student learning. Basically, these programs will be designed to use with the study carrels.

What Does Self-Instruction Mean?

In the broad or general sense, self-instruction can be defined as educating one's self through one's own efforts without the immediate presence of an instructor. Following this definition of self-instruction, self-instructional materials are those learning resources that are designed such that an individual can master the subject presented without the aid of an instructor. An example of self-instructional material is a standard textbook. Assuming an individual has the necessary background to comprehend the subject being presented, the individual could read the textbook, comprehend the information given, thus, learn the subject through self-instruction.

When speaking of self-instructional materials, several terms are found that are generally considered synonymous in educational jargon. Terms such as self study, programmed instruction, auto-instruction, and computer-assisted instruction are used interchangeably with self-instruction. Perhaps the most commonly used of these synonymous terms is programmed instruction. Programmed instruction has been defined in various ways by different individuals; however, a composite definition is that programmed instruction is a method of defining the objectives of a learning experience, developing sequential activities which will allow the learner to accomplish these prescribed objectives, and providing feedback devices so the learner can evaluate his progress and performance in such a way that each learning and evaluation activity builds upon the previous activity. The activities or steps lead the learner through a series of increasing levels of achievement until he has accomplished the overall objectives of the learning experience. The series of achievements can be accomplished at the learner's own particular learning rate, thus, it is individualized instruction. Program instruction is commonly designed in the form of programmed texts. However, audio-visually aided presentations through the use of various teaching machines, and computer-assisted instruction can also be programmed.

Why Use Self-Instructional Materials?

Extensive educational research has found that student learning can be accomplished eas-

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ier and with more retention through independent study, and this has influenced many medical educators to look toward this teaching-learning method as a possible solution to some of their educational problems. Some of the broad needs that self-instruction can help meet are as follows:

1. The growth of medical knowledge demands that educational practices be constantly re-examined to assure that they are as efficient and effective as possible. The limited curricular time must be used in the most satisfactory manner available. Much basic information can be given to students to learn on their own and at their own rates of ability. The instructor can devote those talents that are uniquely his in guiding students toward further understanding and application of basic information. Too often faculty time is wasted in giving out facts that can be read in a textbook or presented in some other form.

2. Class sizes are being enlarged; consequently, educational programs must be designed to provide for individual differences among students and to assure the continuation of the student-faculty relationships that pertain with smaller classes. Self-instruction can help in providing for individual differences and in allowing faculty time to work individually with students. With the increased emphasis on admitting minority and disadvantaged students, this teaching-learning method can become a great asset.

3. It is now recognized that the pattern of lifelong study needed by physicians is best developed in school, where assistance can be provided in the acquisition of both skills and attitudes required for effective self-instruction.

Self-instructional materials can be particularly helpful in improving the quality of student education in clinical clerkships. Some specific ways in which they can be used are as follows:

1. Many students complete clerkships without seeing patients with common diseases or disorders related to that particular subject. For example, in pediatrics a student in the summer might miss seeing herpatic gingivo-stomatitis or a positive strep culture or a case of measles during his entire rotation. Self-instructional presentations of these diseases would guarantee student exposure.

2. Since students rotate through the services, much faculty time is spent on repeating presentations. This repetitious activity becomes boring after several rotations, and the instructor finds himself making inferior presentations after a few times. This core material could be packaged in self-instructional modules for student use, thus, encouraging more efficient use of faculty-physician time.

3. Since clerkship time is limited, students do not get to see the natural history and long-term development of patient diseases and disorders. Programs could be developed that would present cases in a sequential manner showing the long-term evolution of a condition. (For example, postural changes that correct themselves in infancy, hemangiomas that go away spontaneously, large umbilical hernias that regress without medical intervention, and carcinomas that develop and are removed.)

4. There are times when students are on call or on the wards when the patient load is light. If the learning resources were available, they would have time to use them. Since library facilities close before midnight, the availability of the carrels will make it possible for continued study.

5. Students can review for board exams without having to consult instructors, etc.

The advantages of self-instruction are definitely not limited to the clinical years of medical education. Perhaps it is better suited for the basic science years when core information is taught. Efforts are being made to find ways in which this method of instruction can be feasibly utilized in the first two years of the medical curriculum. However, the number of students involved in the first and second years make the audio-visually equipped study carrels an expensive endeavor. Since the classes are divided for clerkships, this problem is alleviated for the clinical years. Also, space to place large numbers of carrels prohibits their use for large classes. In the clinical departments, space can be found for one to three carrels which are sufficient to accommodate the number of students on each clerkship.

These logistical problems are currently being studied and solutions will be forthcoming. With the rapid advance of technology, methods by which students can learn at home through use

of media should be more readily available in the near future.

How will the Carrels be Equipped and Distributed?

Twenty study carrels have been distributed throughout the clinical departments. The departments with the largest student enrollments per clerkships have two to three carrels, others have two carrels, and some will receive one carrel. Each carrel has a Carousel slide projector, an audio-cassette player, a built-in rear screen for projection, and earphones for audio-programs. The cassette tape-player can be synchronized with the slide projector for slide/tape presentations; and it can be programmed to allow for student participation in the learning experience. An example would be that the tape would be programmed to stop to allow students time to respond to a question, label a drawing, look at an x-ray, extensively study the presented slide, study a gross specimen, etc. The student can re-start the tape when he is ready.

The carrels are equipped to accommodate other teaching machines such as filmstrip projectors, super 8-film projectors, and rear-view projectors. It was felt that the slide/tape would allow flexibility in developing, refining, and analyzing the self-instructional programs. Others will be added as needed.

Theoretically, the purchase of the study carrels (hardware) before developing an extensive library of programs is putting "the cart before the horse," because without good, well-presented programs, the "hardware" is not worth the "nuts and bolts" that hold it together. However, it is felt that the equipment purchased will facilitate this necessary development. Many clinical faculty already have programs ready for student use, others are in the production process, and many materials can be commercially obtained.

What are the Implications to Medical Education?

If it is determined that the use of self-instructional materials improves the quality of medical education, makes it possible to admit more students, increases the efficient use of faculty-physician manpower, and makes it possible to shorten the time required to obtain the M.D. degree without jeopardizing quality, this would have a great impact on medical education. The tremendous growth in medical knowledge could more easily be made available for student learning. After developing the basic information into self-instructional packages, the faculty can devote their talents toward developing the clinical skills, understanding, attitudes, appreciations, and concepts that they deem most appropriate for today's physician. This procedure would place most of the responsibility on the student for obtaining the basic knowledge—a practice that is infinitely important after graduation.

Repetitious lectures, instructions, and orientation sessions caused by student rotations could be packaged for student self-learning. This will guarantee that all students get a quality and complete presentation. The inevitable variables of instructor fatigue, interest, and availability could be controlled.

Self-learning packages can help to guarantee student exposure to all types of patient problems. With time, the chance factor inherent in rotating procedures could be eliminated. This would do much to increase the quality and breadth of knowledge of graduating physicians.

The efficient and effective use of individualized instruction can allow the faculty more time for tutoring students who really need it, seeing patients, conducting research, handling administrative chores, etc., while being assured that their students are getting more than they would have time to give them in formal didactic presentations. As programs are developed, refined, and tested they could be made available to other medical schools. These exchanges of materials could be very helpful in developing the self-instructional libraries for each discipline.

Summary

The College of Medicine of the University of Kentucky has initiated a program designed to improve the teaching and learning in its medical curriculum. In an effort to improve the overall quality and breadth of learning, to allow for individual differences among students, and to more efficiently use teaching-physician manpower, self-instructional materials will be used throughout the clinical years. This effort will be thoroughly analyzed to determine its effectiveness.

EDITORIALS

For Better Medical Care

IN THE April '72 Federation Bulletin of State Medical Boards is published an address by Wesley W. Hall, M.D., President of AMA, at the Federation Dinner in Chicago, February 3rd. This was the annual Walter L. Bierring Lecture and deals primarily with what the Medical Boards and the AMA are doing to increase and upgrade Medical Care in this country. He outlined some of the less publicized and less appreciated accomplishments which are significant and important to us all.

The Federation Licensing Examination — generally referred to as FLEX — was inaugurated about five years ago as a standard examination which should be uniform for all states and make the reciprocity of licensing much easier. This has undoubtedly proved to be a progressive measure and is now used in 40 states. It is hoped that it may soon be adopted by the others. The Education Council for Foreign Medical Graduates — ECFMG — examination, sponsored by AMA has been an invaluable instrument during the last ten years in screening the graduates of foreign medical schools who wish to live and practice in the United States. This examination has been required in Kentucky for several years and now is felt to be indispensable.

A large number of American students, failing to get into our medical schools, study medicine abroad, sometimes in excellent schools, less often in schools of substandard rating. Proper certification of these American-born graduates, obtaining adequate postgraduate training programs for them here, and assuring their level of professional competence prior to their entering practice at home is a continuing concern of the AMA and our Licensing Boards. Means of accomplishing this are in the process of being systematized.

The increasing demand for licensure in the ever enlarging field of allied professions has recently posed an additional problem. "The AMA recommends a holding action on licensure of any additional allied occupations until long term solutions are developed because "Health care must be quality care." And in the matter of unscientific cultists, applicants for licensure as primary health care providers must be graduates of institutions accredited by an agency recognized by the United States Office of Education and the National Commission on Accrediting.

On the question of physician shortage Doctor Hall had this to say: "As you know, a persistent cry has been heard often that America needs 50,000 more physicians. Well, since the mid 1960's we have added 53,000 physicians. The Bane Report of 1959 said America would need 330,000 physicians by 1975. I have news for that report. We had an estimated 345,000 physicians at the end of 1971. That report said we would need 11,000 medical graduates annually by 1975. We had almost 9,000 last year and we should easily add the other 2,000 in the next two or three years. As you know, we have 108 medical schools with five more to open this fall, for a total of 113 schools, compared with 86 only a decade or so ago. And remember, the number of competent foreign physicians entering this country will add another 5,000 or 6,000 doctors to our health manpower field. It is important to note that physician population growth has met or surpassed every projected physician-manpower need since forecasts have been made."

The quality of Medical Care can be kept at a high standard only by continued use and expansion of postgraduate training for all physicians, and the more effective use of peer review. Doctor Hall feels that re-licensure of physicians, especially of those in subspecialty fields, poses difficulties. The expansion of continuing education and peer review are more effective in promoting better Medical Care.

We must feel indebted to Doctor Hall for this very comprehensive and optimistic review of our efforts toward improvement of Medical Care.

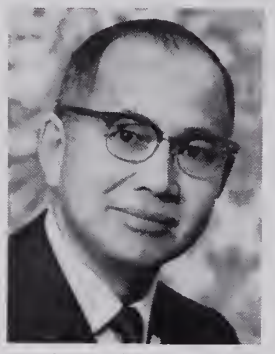
SAM A. OVERSTREET, M.D.

ORGANIZATION SECTION

Timely Medical Topics To Highlight Scientific Sessions At 1972 KMA Annual Meeting, September 19-21

Respiratory Distress, Trauma and Atherosclerosis will be three of the themes highlighting the four general scientific sessions of the 1972 KMA Annual Meeting. Guest speakers from across the country and local physicians will deliver outstanding scientific presentations on subjects that are both timely and informative for today's physician.

The 1972 session, which will be held September 19-21 at the Louisville Convention Center and Stouffer's Inn, will also include meetings of the 16 specialty groups, two meetings of the KMA House of Delegates, the President's Luncheon, an Orientation Program for new members, technical and scientific exhibits, and the annual convention of the Woman's Auxiliary to KMA.



Doctor Hon

Scheduled for the Tuesday morning session on Respiratory Distress is a presentation of "The Diagnosis of Fetal Distress" by Edward H. Hon, M.D., Los Angeles. Doctor Hon, a native of Canton, China, is Professor of Obstetrics and Gynecology and Chief of the Perinatal Biology Section, University of Southern California Medical Center.

A guest of the Kentucky Society of Anesthesiologists, Adolph H. Giesecke, Jr., M.D., Dallas, will speak Tuesday morning on "The Trauma Patient and the Anesthesiologist." A Professor of Anesthesiology at the University of Texas Southwestern Medical School at Dallas, Doctor Giesecke is the Immediate Past President of the Southern Society of Anesthesiologists.

Participating in the Thursday morning general program will be Harvey F. Watts, M.D., Philadelphia, who will speak on "The Role of Plasma Lipoproteins in the Pathogenesis of Atherosclerosis." A Professor of Pathology at Temple University Medical School, Doctor Watts is Director of Laboratories at the Philadelphia Episcopal Hospital.

Information regarding other guest speakers and various aspects of the 1972 Annual Meeting will be carried in future issues of *The Journal.*



Doctor Giesecke



Doctor Watts

Five District Meetings Held During May and June

Nine Trustee Districts have held meetings during the 1971-72 Associational Year. During May and the first part of June, five meetings were scheduled by District Trustees.

KMA President John S. Harter, M.D., Louisville, addressed the Thirteenth Trustee District on May 2. Trustee for the District, J. Wesley Johnson, M.D., Ashland, also invited Fred C. Rainey, M.D., Elizabethtown, to discuss legislative activities.

On May 9, Henry B. Asman, M.D., and Marvin A. Bowers, Jr., M.D., both of Louisville, spoke to the Sixth Trustee District. Paul J. Parks, M.D., Bowling Green, presided over this meeting.

A scientific program and a presentation by Doctor Harter highlighted the meeting of the Fourteenth Trustee District on May 18. Ballard W. Cassady, M.D., Pikeville, who presided at the meeting, invited faculty members of the University of Kentucky College of Medicine to present the scientific program.

Doctor Asman presented an informative program concerning the Kentucky Foundation for Medical Care at meetings of the Seventh and Third Trustee Districts on May 31 and June 6, respectively. Trustees for these Districts are Thomas P. Leonard, Sr., M.D., Frankfort and Ralph L. Cash, M.D., Princeton.

Annual Mtg. Headquarters To Be Stouffer's Louisville Inn

Stouffer's Louisville Inn has been selected by the KMA Executive Committee as the Headquarters Hotel for the 1972 Annual Meeting.

All business activities of the Association during the Annual Meeting will be conducted at the Headquarters Hotel, including the two meetings of the KMA House of Delegates, meetings of the Reference Committees, and the President's Luncheon.

Located at 120 W. Broadway in downtown Louisville, Stouffer's Inn is conveniently situated for convention activities. Shuttle buses will be utilized by the Association in getting to and from the activities being held at Convention Center.

Physicians are urged to begin making their reservations and plans for this year's important meeting.

Nominations for KMA Awards Has August 5 Deadline

The deadline for receiving nominations for KMA's two top awards is August 5, according to Douglas E. Scott, M.D., Lexington, Chairman of KMA's Awards Committee.

The Distinguished Service Award is presented to a physician in Kentucky for his contribution to organized medicine in the form of membership and activity in a county medical society and the State Association. This award also is based on individual medical service; community health, education and civic betterment; medical research and distinguished voluntary military service.

The second award, the Kentucky Medical Association Award, is designed to honor a lay person for his outstanding accomplishments in the field of health and/or medical care. This award was formerly called the R. Haynes Barr Award.

All nominations should be sent to the KMA Headquarters Office and marked "Attention: Awards Committee." Those received after the August deadline will not be eligible for consideration in 1972.

Presentation of the awards will take place during the President's Luncheon at 11:50 a.m., September 20, during the 1972 KMA Annual Meeting.

Ky. Congressional Delegation Honored by KMA

The 15th Annual KMA Washington Dinner was held on May 16, 1972. Invited to the dinner were both of Kentucky's U. S. Senators and all the U. S. Representatives from Kentucky The Congressmen's administrative assistants were also invited.

On Monday evening, May 15, there was a briefing session for those in attendance held at the AMA Washington Office. On the following day visits were made on an individual basis with all the members of Kentucky's Congressional Delegation.

John S. Harter, M.D., Louisville, President of KMA and Hoyt D. Gardner, M.D., Louisville, Chairman for National Affairs, KMA Legislative Committee, express their appreciation to the Kentucky physicians and their wives who attended the Annual Washington Dinner.

Drs. Ambach, Morgan Honored By KAFP At May Meeting

John W. Ambach, M.D., Louisville, was named President-Elect of the Kentucky Academy of Family Practice and Edgar B. Morgan, also of Louisville, was named as the Citizen-Doctor of the Year by the Academy. The events took place during the 21st Annual Scientific Session of KAFP held May 12-14 at Barkley Lodge in Cadiz.



Doctor Ambach



Doctor Morgan

The three-day assembly featured outstanding scientific presentations by state and national speakers, a meeting of the Congress of Delegates, and the installation of KAFP President Paul R. Smith, M.D., London. Doctor Smith succeeded Kenneth M. Eblen, M.D., Henderson.

Doctor Ambach, a 1957 graduate of the University of Louisville School of Medicine, is Board certified in Family Practice. He just recently served as Vice-President of the KAFP and has served on committees of the American Academy of Family Practice.

A former President of KAFP, Doctor Morgan was cited for his help in setting up the new departments of family practice at the U of L and the U of K medical schools. He is a Kentucky delegate to AAFP and is the liaison officer from KAFP to the U of L.

A scientific session is scheduled for July 19-20, 1972, at Cumberland Falls Dupont Lodge. Donald C. Barton, M.D., Corbin, chairman for this program, urges all physicians, KAFP member or non-member, to attend this informative meeting.

William G. Malette, M.D., Lexington, was named as president-elect of the Association for the Advancement of Medical Instrumentation at its Seventh Annual Meeting held April 25 in Las Vegas. Doctor Malette is Associate Professor of Surgery at the University of Kentucky Medical Center.

Ky. Foundation for Medical Care Is Granted Tax Exempt Status

The Board of Directors of the Kentucky Foundation for Medical Care have announced that the Foundation's request for exemption from payment of federal tax on income has been granted.

On April 28, 1972, the U. S. Internal Revenue Service declared the Foundation to be a non-profit, public foundation in accordance with section 509(a) (3) of the Internal Revenue Codes of 1954 and therefore tax-exempt. The Foundation received this determination based on its relationship to KMA as a supporting organization.

Foundation activities have been necessarily restricted pending attainment of this newly achieved status because of a lack of operating funds. No funds could be feasibly accepted until the Internal Revenue Service made this consideration. It is anticipated that increased operations may soon result based on the Foundation's new capability to accept contributions which would be tax deductible.

In other recent actions, the Board of Directors decided on reporting responsibilities to the KMA House of Delegates by the Foundation, discussed current developments in peer review and the expansion of utilization review, and approved a recommendation by the Health Care Delivery Committee to extend endorsement on behalf of the Association to the Renal Dialysis Program at the University of Kentucky.

Loans Approved For 32 Students At Scholarship Fund Meeting

The Board of Trustees of the Rural Kentucky Medical Scholarship Fund, at the 26th Annual Meeting held May 18, increased from $2,000 to $2,500 the annual regular loans and from $2,500 to $3,000 the "critical county" loans. The loan agreements are presented to medical students who are residents of Kentucky who agree to practice in an approved rural area of the State one year for each loan received. Forgiveness features are applicable to recipients who establish practice in designated areas of critical or semi-critical need.

There are now 173 physicians in practice in 86 Kentucky counties who have received financial assistance from the Fund according to G. L. Simpson, M.D., Greenville, Chairman of the Fund.

The Board of Trustees approved 32 loans amounting to $81,500 to medical students for the coming school year. Thirteen loans were granted to first loan applicants. Seven of the new applicants will attend the University of Louisville, and six will attend the University of Kentucky.

Four new members were elected to the Board of Trustees. They are: Carolyn McKinley, M.D., Glasgow; Raymond Wells, M.D., Inez; Robert Chambliss, M.D., Hardinsburg, and Westel L. Creager, M.D., Marion.

John C. Quertermous, M.D., Murray, a past president of KMA, was elected Vice-Chairman of the Board succeeding Russell Hall, M.D., Prestonsburg, whose resignation was accepted with sincere appreciation for his past services. Henry S. Spalding, M.D., Bardstown, was named Chairman of the Postgraduate Committee of the Fund.

Doctor Simpson, in noting the success of the program over the past 26 years, expressed particular appreciation for the interest and support of Governor Wendell Ford, Health Commissioner William P. McElwain, M.D., and the members of the Kentucky General Assembly.



Having served as custodian of the KMA Headquarters Building since its completion in January, 1962, Mr. Robert Carr (left) accepts a gift of appreciation for his services from Mr. William Applegate, Assistant to the Executive Director of KMA. With the addition to the Headquarters Building completed, Mr. Carr found it necessary to retire from his part-time position with the Association.

KMA Board Approves Adoption Of Auto Leasing Program

The Kentucky Medical Association is constantly striving to provide valuable assets to its membership. One of the Association's most recent projects has been to promote tangible benefits for its members.

On April 12, the KMA Board of Trustees approved the adoption of an auto leasing program to be implemented by the General Leasing Corporation, of Louisville. This plan will offer to each member the opportunity to lease automobiles through the KMA approved leasing company.

In addition, the Board approved the endorsement of the prepaid health insurance plan which is now being offered by Blue Cross-Blue Shield to all physicians in the state.

Additional information regarding these programs will be forthcoming from the KMA Business Management and Services Committee.

Frank W. Randall, M.D., is no longer practicing in association with Arnold C. Williams, M.D., Lexington, as reported in last month's issue of *The Journal.* In January, 1972, Doctor Randall went into private general practice.

Digest of Proceedings, Board of Trustees

April 12, 1972

The third regular session of the KMA Board of Trustees was held on April 12, 1972 at the Holiday Inn in Somerset. At the beginning of the meeting, the President's Report and Headquarters Office Report were accepted for information.

Ballard Cassady, M.D., Chairman of the KMA Budget Committee, presented the proposed budget for the 1972-73 Associational Year. The budget had previously been approved by the Budget Committee. The budget was accepted by the Board and the Committee was commended for its efforts and preparation of the budget.

A summary of bills introduced and action taken during the 1972 Kentucky General Assembly of interest to the medical profession was distributed to the members present.

Ad Hoc Committees of the Board reported as follows: 1) *Ad Hoc Committee on AMA Membership* presented light areas of endeavor by which they felt AMA membership could be improved. The recommendations were accepted. 2) *Ad Hoc Committee to Study Rural Kentucky Medical Scholarship Fund* reported it was felt that KMA members need to be made more aware of the purpose of the fund and it was recommended that a copy of the contracts used and a copy of the map showing the location of the recipients in the state be distributed either in the communicator or in a separate mailing. Recommendations of the committee were approved. 3) *Ad Hoc Committee to study Resolution H* stated that full discussions of the committee should be made available to the Board and other interested committees. It was also felt for various reasons that it would be impossible to implement the Resolution at this time. A minority report referring the Resolution back to the House of Delegates in 1972 for reconsideration was accepted by the Board of Trustees. It was also the feeling of the Board that a special Reference Committee be formed at the 1972 Annual Meeting to study Resolution H. 4) *Ad Hoc Committee on Electronic Data Processing*—The recommendation of this committee including adoption of a statewide computer billing program was approved.

Henry B. Asman, M.D., President of the Kentucky Foundation for Medical Care, Inc. reported to the Board concerning the meeting held by the Foundation on January 13. The report was accepted for information.

The chairman informed the Board concerning several state councils and boards to which KMA submits nominees to the Governor for appointment. A list of these nominees was distributed to the Board and approved by them.

Several standing committees of KMA made reports during the Board meeting. These are as follows: 1) *Building Committee* Chairman reported the building addition is completed and invited the members to tour the new addition. 2) *ETV Committee* made recommendations to the Board concerning a new concept in programming and the possibility of utilizing close circuit television through the community. 3) *Legislative Committee* request concerning letters to the Kentucky Pharmaceutical Association and the Kentucky Nurses Association was considered by the Board and it was felt that letters would serve no useful purpose. 4) *Orientation Committee* made recommendations concerning a new program. The recommendation that all new members be excused from orientation this year was accepted by the Board. 5) *Title XIX Committee* presented a resolution which had been given to the Advisory Council for Medical Assistance on March 22, 1972. The Board agreed with the resolution as presented by the Title XIX Committee. 6) *Plans and Development Committee* presented recommendations concerning experimental health care delivery systems, participation of physicians in comprehensive health planning programs, continuing medical education and the possibility of committee meetings to be held in conjunction with the Interim Meeting. The Board accepted the recommendations and referred them to appropriate committees. 7) *Business Management and Services Committee* made recommendations regarding auto leasing, health prepayment plans and other tangible benefit programs for KMA members. These recommendations were approved. 8) *Public Relations Committee* reported that they had implemented two referrals to the Board. A suitable insignia designating KMA membership has been completed and the committee is developing a State Fair exhibit which will be staffed by the Auxiliary members. Report of the committee was accepted for information.

Several other matters were discussed by the Board of Trustees. They are as follows: The Board recommended that Walter I. Hume, Jr., and Henry B. Asman, M.D. be reappointed as Editor and Associate Editor of *The Journal* and A. Evan Overstreet, M.D. be appointed Assistant Editor.

The Chairman of the Board reported that the Washington Dinner will be held on May 15 and 16 and invited all members of the Board to attend.

A Judicial Council ruling, regarding physicians serving as members of the Board of Directors of local health projects, was presented to the Board by S. Randolph Scheen, M.D. It was felt by the Judicial Council that there was no breach of ethics in a physician serving on a Board and rendering service to patients referred by this Board.

The Chairman informed the members that a letter had been received from AMA regarding the need to keep members aware of changes in national health insurance activities. The letter was referred by the Board to the Legislative Committee.

It was reported that the 1972 Annual Meeting will be held at Stouffer's Inn and that future meetings will be held at one facility, either the Galt House or Ramada Inn; both facilities are drawing layouts for the Annual Meeting.

KMA has been requested to co-sponsor a JCAH workshop in conjunction with the Kentucky Hospital Association. It was moved that KMA accept this responsibility.

The Board decided that the dates of the Interim Meeting should be changed and the entire format of the Interim Meeting should be studied by the Interim Meeting Program Committee. A resolution and recognition of service was presented to George F. Brockman, M.D., Greenville.

The date of the next meeting was set for August 3, 1972 at 9 a.m. at the KMA Headquarters building.

In Memoriam

ISRAEL MUSS, M.D.
Louisville
1909-1972

Israel Muss, M.D., chief of physical medicine at Veterans Hospital in Louisville, died March 20. A 1936 graduate of the Howard University College of Medicine, Doctor Muss was known for his innovative work with polio-paralysis and muscular dystrophy patients in Louisville hospitals.

He was a member of the Jefferson County Medical Society, as well as the Kentucky and American Medical Associations.

MAX C. SALB, M.D.
Kuttawa
1904-1972

Max C. Salb, M.D., died April 19 at the age of 67 of a heart attack. A native of Jasper, Indiana, Doctor Salb graduated from Indiana University School of Medicine in 1929. He has served as physician for the Kentucky State Penitentiary in Eddyville for the past four years until his resignation in March, 1972.

Doctor Salb was president of the Lyon County Medical Society and belonged to the Kentucky and American Medical Associations and the American Academy of Family Physicians.

FOSTER D. COLEMAN, M.D.
Louisville
1910-1972

Foster D. Coleman, M.D., 61, a Louisville internist, died April 29. President of the Jefferson County Medical Society in 1959, Doctor Coleman has served as president of several Louisville hospital staffs. A native of Pike County, Doctor Coleman graduated from the University of Louisville School of Medicine in 1934.

Doctor Coleman had been an associate professor of medicine at the U of L school and was an emeritus member of the Transylvania Medical Society.

JAMES W. DORTON, M.D.
Louisville
1931-1972

James W. Dorton, M.D., a Louisville family physician, died April 27. He received his M.D. degree from the University of Louisville School of Medicine in 1956. A member of the Jefferson County Medical Society and the Kentucky and American Medical Associations, Doctor Dorton was also an antique automobile enthusiast.

R. ARNOLD GRISWOLD, SR., M.D.
Louisville
1898-1972

R. Arnold Griswold, Sr., M.D., a Louisville surgeon, died May 1.

A 1925 graduate of the University of Louisville School of Medicine, Doctor Griswold served as the head of that school's Department of Surgery from 1938 to 1952. He was chief surgeon at Louisville General Hospital and Walter Reed Army Hospital in Washington.

Active in several organizations, he was a past president of the Kentucky Surgical Society and the Kentucky Chapter, American College of Surgeons. In 1963 he was honored with the Surgeons Award for Distinguished Service to Safety from the National Safety Council, which cited his efforts in highway safety, being the first to call for seat belts in cars.

GUSTAV G. ALTMAN, M.D.
Louisville
1884-1972

Gustav G. Altman, M.D., a retired Louisville surgeon, died May 4 at the age of 88. A 1908 graduate of the University of Louisville School of Medicine, he practiced in Helena, Arkansas for several years before beginning his practice in Louisville, which lasted about 60 years. Besides his membership in the Jefferson County Medical Society and the Kentucky and American Medical Associations, Doctor Altman was a Fellow of the American College of Surgeons and a member of the Southeastern Surgical Congress.

During the past year, an estimated 2,600 Kentucky school children suffered eye injuries.

Industry is hit by an estimated 1,000 eye injuries every working day of the year.

Ninety percent of all eye injuries due to industrial and school lab accidents can be prevented.

Information on all aspects of eye health and eye safety are available for the asking from the Kentucky Society for the Prevention of Blindness, 1102 Heyburn Building, Louisville, Kentucky, 4020.



PROTEIN CONTENT / 1 Cup Prepared Soup*

Bean with Bacon	7.7	Green Pea	7.8
Beef	9.1	Hot Dog Bean	8.6
Chicken Broth	8.4	Oyster Stew	6.0
Chicken 'N Dumplings	6.6	Pepper Pot	6.9
Chili Beef	7.0	Split Pea with Ham	11.6
Consomme	5.6	Vegetable Beef	5.7

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There's a soup for almost every patient and diet ...for every meal and, it's made by Campbell

the 3 phases of Eve



All women are not equal in their endogenous hormonal output. And, while all oral contraceptives are fundamentally effective, they exhibit **differences in their activity levels and estrogen-progestogen ratios that affect different women differently**—in both short and long-term use. Some brands may be insufficient for the woman's needs or else may exceed them.

Searle offers a family of O.C. products that covers the range of women's needs to help you provide the right pill for the right woman at the right time.

References **1.** Editorial: Oral Contraceptives. Which Pill for Which Patient? Patient Care *3*:90-115 (Feb.) 1969 and *4*:135-145 (June 15) 1970 **2.** Greenblatt, R. B. Progestational Agents in Clinical Practice. Med. Sci. *18*:37-49 (May) 1967 **3.** Kistner, R. W. Gynecology: Principles and Practice, ed. 2, Chicago, Year Book Medical Publishers, 1971 **4.** Kistner, R. W. The Pill: Facts and Fallacies About Today's Oral Contraceptives, New York, Delacorte Press, 1968 **5.** Nelson, J. H. Clinical Evaluation of Side Effects of Current Oral Contraceptives. J. Reprod. Med. *6*:50-55 (Feb.) 1971 **6.** Orr, G. W. Oral Progestational Agents: Therapy and Complications. S. Dakota J. Med. *22*:11-17 (Jan.) 1969

the Ovulen phase

Most women* with a **balanced hormone profile and normal menses** do best on a middle-of-the-road pill that is neither estrogen dominant nor strongly progestogen dominant.

(*Typical clues—normal body build and breasts, feminine appearance, healthy skin and hair. Vaginal cytology slide—balanced "pink and blue.")

Some women having problems on other O.C.s might do well on Ovulen.

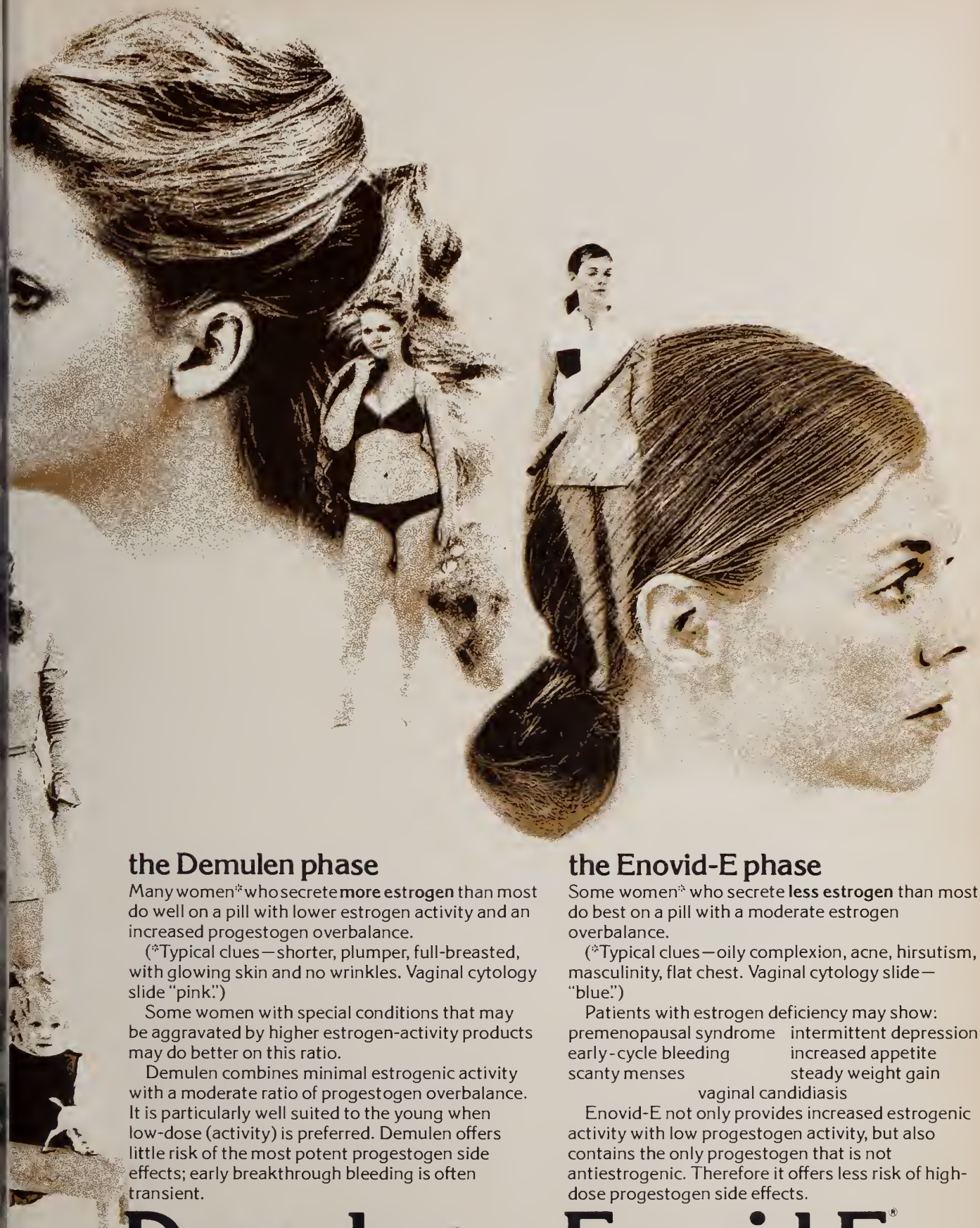
Ovulen has a distinctive hormonal balance that combines moderate estrogenic activity with a slight progestogen dominance. It has an excellent record of patient acceptance.

Ovulen®

Each white tablet contains: ethynodiol diacetate 1 mg./mestranol 0.1 mg.

SEARLE

For brief summary of prescribing information, see following page.



the Demulen phase

Many women* who secrete **more estrogen** than most do well on a pill with lower estrogen activity and an increased progestogen overbalance.

(*Typical clues—shorter, plumper, full-breasted, with glowing skin and no wrinkles. Vaginal cytology slide "pink.")

Some women with special conditions that may be aggravated by higher estrogen-activity products may do better on this ratio.

Demulen combines minimal estrogenic activity with a moderate ratio of progestogen overbalance. It is particularly well suited to the young when low-dose (activity) is preferred. Demulen offers little risk of the most potent progestogen side effects; early breakthrough bleeding is often transient.

Demulen®

Each white tablet contains: ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg
Each pink tablet in Ovulen-28® and Demulen® 28 is a placebo, containing no active ingredients.
Both Ovulen and Demulen are available in 21- and 28-pill schedules.

the Enovid-E phase

Some women* who secrete **less estrogen** than most do best on a pill with a moderate estrogen overbalance.

(*Typical clues—oily complexion, acne, hirsutism, masculinity, flat chest. Vaginal cytology slide—"blue.")

Patients with estrogen deficiency may show:

premenopausal syndrome
early-cycle bleeding
scanty menses
intermittent depression
increased appetite
steady weight gain
vaginal candidiasis

Enovid-E not only provides increased estrogenic activity with low progestogen activity, but also contains the only progestogen that is not antiestrogenic. Therefore it offers less risk of high-dose progestogen side effects.

Enovid-E®

Each tablet contains: norethynodrel 2.5 mg./mestranol 0.1 mg.

Oral contraceptives are complex medications and, after reference to the prescribing information, should be prescribed with discriminating care.

for the 3 phases of Eve:

a family of O.C. products

Ovulen®

Each white tablet contains:
ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen®

Each white tablet contains:
ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possibl influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrena hepatic or uterine function awaits further study. A decrease in glucose toleranc has been observed in a significant percentage of patients on oral contracep tives. The mechanism of this decrease is obscure. For this reason, diabetic pa tients should be carefully observed while receiving Ovulen or Demulen therap The age of the patient constitutes no absolute limiting factor, although treatmen with Ovulen or Demulen may mask the onset of the climacteric. The pathologis should be advised of Ovulen or Demulen therapy when relevant specimens ar submitted. Susceptible women may experience an increase in blood pressur following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contracep tives—A statistically significant association has been demonstrated betweer use of oral contraceptives and the following serious adverse reactions: thrombo phlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relation ship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving ora contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdom inal cramps and bloating), breakthrough bleeding, spotting, change in menstrua flow, amenorrhea during and after treatment, edema, chloasma or melasma breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, sup pression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

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norethynodrel 2.5 mg./mestranol 0.1 mg.

Actions—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Indication—Enovid-E is indicated for oral contraception.

The *Special Note, Contraindications, Warnings, Precautions* and *Adverse Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

SEARLE **Enovid-E®**

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Where "The Pill" Began

KMA Provides Placement Service To Physicians, Communities

Perhaps you have just completed your internship, residency, military obligation or have some other reason for needing to make a change. Perhaps you are a physician in practice and need an associate or a replacement. If so, the KMA Physicians Placement Service is available to help you.

The Physicians Placement Service is designed to help physicians find a desirable area in which to establish practice or to relocate, and to help established physicians find associates.

A semiannual listing of "Opportunities for Practice in Kentucky" is published by the Placement Service. This report lists over 100 areas in Kentucky that need family practitioners either in association with another physician or as a replacement. The Service maintains a similar listing of areas in need of medical specialists. Opportunities for partnership or group practice are also listed and requests are accepted from both physicians and communities for satisfactory placement.

As an additional service, the KMA Physicians Placement Service also publishes, "Physicians Seeking Locations," a quarterly listing. This is compiled from data received from the American Medical Association, requests from recipients of the Rural Kentucky Medical Scholarship Fund, interns and residents in Kentucky, and personal inquiries to the KMA office.

It is the policy of the Placement Service to provide a two-way flow of information between interested parties, rather than try to "place" physicians in the "right" practice situation.

The Service sends a questionnaire to the applicant physician to obtain information on his educational background, his interests, and preference of type of practice. Upon return of the questionnaire, the physician is sent a list of openings in his area of interest. Each opening is detailed on its facilities for home life, office space, proximity to hospital facilities, and other specifics.

Each physician contacting this office for assistance in finding a suitable location for practice is requested to complete a questionnaire in order that his name may be carried on the next listing of "Physicians Seeking Locations."

All qualified physicians who request assistance from the Placement Service are given help. An applicant need not be a member of the Kentucky Medical Association and there is no charge either to the physician or to the community seeking the services of this program.

Inquiries may be addressed to the Physicians Placement Service, Kentucky Medical Association, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205.

An estimated 196,000 Kentucky school children are in need of some form of eye care.



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Application

FOR SPACE IN THE SCIENTIFIC EXHIBIT SECTION

1972 Annual Meeting — Kentucky Medical Association

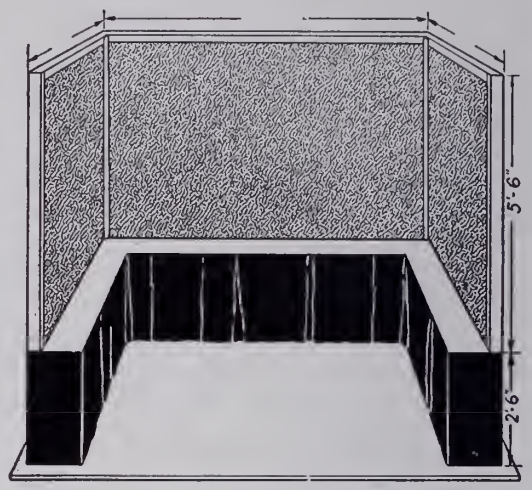
Convention Center — **Louisville, Kentucky** — **September 19, 20, 21**

Fill Out and Mail to:

ARNOLD C. WILLIAMS, M.D., Chairman
Committee on Scientific Exhibits
Kentucky Medical Association
3532 Ephraim McDowell Drive
Louisville, Kentucky 40205

Applications for space should be received before July 1, 1972.

The Kentucky Medical Association welcomes and supports scientific exhibits as a facet of continuing postgraduate education.



1. **Title of exhibit** .....
2. **Name(s) of exhibitor(s)** .....
   Address .....
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4. **Amount of linear footage required** .....
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   SHELF DESIRED? _____Yes _____No
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7. Indicate sources of assistance provided to you in connection with the exhibit .....
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8. Has this exhibit been displayed before? If so, when & where? .....
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9. Please attach a brief outline which includes a general idea of your exhibit.

Date .....

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Signature of Applicant

KMA provides, without cost to the exhibitor, simple shelves, bracket lights and a title sign, provided all items are approved in advance by the Scientific Exhibits Committee.
Transportation and erection costs are the responsibility of the exhibitor.
View Boxes, furniture, decorations, etc., may be rented, if desired, by applying directly to the Joseph T. Griffin Company, 704 West Main Street, Louisville, Kentucky 40202.

The Nephrotic Syndrome

(From Page 475)

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Graduation from approved college or university with a degree of Doctor of Medicine and successful completion of an approved program of internship, supplemented by successful completion of an approved program of resident medicine. Some examples are:

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Must be certified in field of specialty and approved by Kentucky State Board of Health to practice medicine in the Commonwealth of Kentucky.

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These are Candeptin:

The highly effective candicidin for all your vaginal moniliasis patients.

First came CANDEPTIN (candicidin) Tablets for intravaginal use. Then CANDEPTIN Ointment to treat labial involvement and for intravaginal use. Now unique **CANDEPTIN VAGELETTES**—candicidin ointment in soft gelatin capsules—extend the range of CANDEPTIN therapy to even your pregnant and virginal patients (you merely cut off the narrow tip and extrude the contents through the intact hymen).

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CANDEPTIN brings your patients prompt relief of itching, burning and discharge—usually within 72 hours.[1] A single, 14-day course of treatment is usually all that's needed for a complete cure.[2,3,4]

Significantly more potent *in vitro* than nystatin.[5] CANDEPTIN Tablets and Ointment have shown clinical cure rates of 90% and higher in both pregnant and non-pregnant patients.[1,4,6] And in recent studies of **CANDEPTIN VAGELETTES** Vaginal Capsules involving both pregnant and non-pregnant patients, a 100% culture-confirmed cure rate was achieved with a single 14-day course of therapy.[2,3]

Only CANDEPTIN gives you a dosage form for every therapeutic need, plus *eight years' clinical proof* of potency. Consider CANDEPTIN for your next vaginal moniliasis patient.

CANDEPTIN®
(candicidin)

Description: CANDEPTIN (candicidin) Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% Candicidin activity in U.S.P. petrolatum. 3 mg. of Candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candicidin powder equivalent to 3 mg. (0.3%) Candicidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETTES Vaginal Capsules contain 3 mg. of Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.
Action: CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETTES Vaginal Capsules possess anti-monilial activity.
Indications: Vaginitis due to Candida albicans and other Candida species.
Contraindications: Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETTES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.
Caution: During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.
Adverse Reaction: Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETTES Vaginal Capsules have been extremely rare.
Dosage: One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETTES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.
Available Dosage Forms: CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETTES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

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What's on your patient's face...

may be more important than his chief complaint

The lesions on his face may be solar/actinic — so-called "senile" keratoses...and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics: the typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent, and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.



Patient P.T. seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.*

Sequence of therapy/ selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; the reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.



Patient P.T. seen on 6/12/67, seven weeks after discontinuation of 5%-FU cream. Reaction has subsided. Residual scarring not seen except for that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.*

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local — pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported — insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers — containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes — containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

This patient's lesions were resolved with

Efudex® (fluorouracil)

5% cream/solution

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Pre-Sate®
(chlorphentermine HCl)

CAUTION: Federal law prohibits dispensing without prescription.

Indications: Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (*i.e.*, several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.

Contraindications: Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monamine oxidase inhibitors, since hypertensive crises may result.

Warnings: When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexigenic effect; discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence: Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage In Pregnancy: The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage In Children: Not recommended for use in children under 12 years of age.

Precautions: In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorexic agent and a restrictive dietary regimen.

Adverse Reactions: Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration: The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

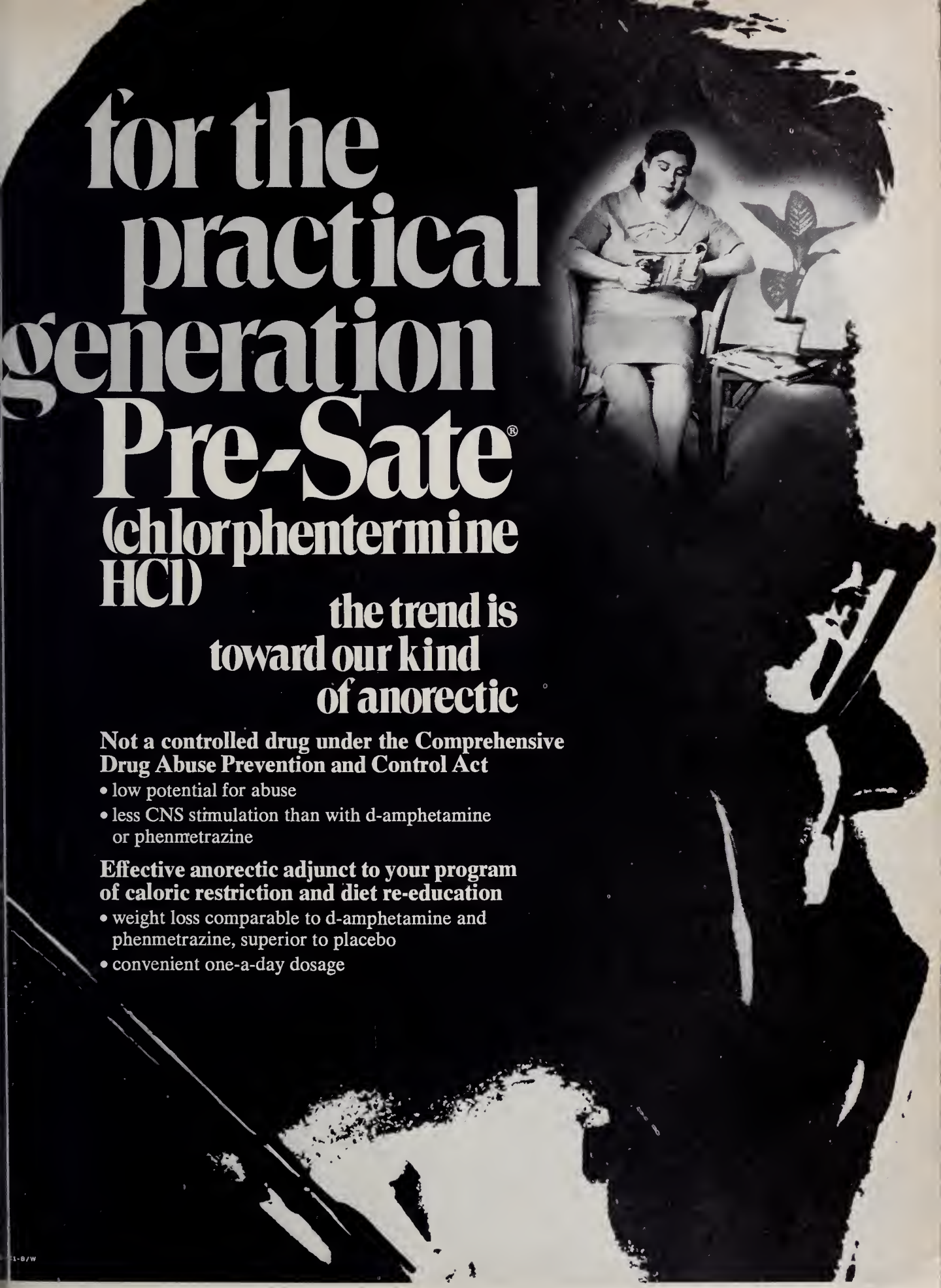
Overdosage: Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

How Supplied: Each Pre-Sate (chlorphentermine hydrochloride) tablet contains the equivalent of 65 mg chlorphentermine base; bottles of 100 and 1000 tablets.

Full information available on request.

WARNER-CHILCOTT
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Pre-Sate® (chlorphentermine HCl)...the increasingly practical appetite suppressant



When you select this familiar antibiotic for IV infusion you have available a broad dosage rang that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections. In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomyci hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in nc less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

nfections caused by susceptible strains
f pneumococci, streptococci, and
taphylococci, including penicillin-
esistant strains. Staphylococcal strains
esistant to Lincocin (lincomycin
ydrochloride, Upjohn) have been
ecovered. Before initiating therapy,
ulture and susceptibility studies should
e performed. Lincocin has proved
aluable in treating patients hyper-
ensitive to penicillin or cephalosporins,
ince Lincocin does not share
ntigenicity with these compounds.
lowever, hypersensitivity reactions
ave been reported, some of these in
atients known to be sensitive to
enicillin.

Well tolerated at infusion site: Lincocin
travenous infusions have not
roduced local irritation or phlebitis,
hen given as recommended. Lincocin
usually well tolerated in patients who
e hypersensitive to other drugs.
evertheless, Lincocin should be used
utiously in patients with asthma or
gnificant allergies.

patients with impaired renal function,
e recommended dose of Lincocin
ould be reduced to 25—30% of
e dose for patients with normal
dney function. Its safety in
egnant patients and in infants
ss than one month of age has
t been established.

incocin may be used with other
timicrobial agents: Since Lincocin
stable over a wide pH range, it is
itable for incorporation in
travenous infusions; it also may be
administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



972 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatmei *Skin and mucous membranes*—Skin rash urticaria, vaginitis, and rare instances of e foliative and vesiculobullous dermatitis ha been reported. *Liver*—Although no direct r lationship to liver dysfunction is establishe jaundice and abnormal liver function te (particularly serum transaminase) have be observed in a few instances. *Cardiovascul* —Instances of hypotension following pare teral administration have been reporte particularly after too rapid IV administi tion. Rare instances of cardiopulmonary a rest have been reported after too rapid I administration. If 4.0 grams or more admi istered IV, dilute in 500 ml of fluid a administer no faster than 100 ml per hou *Special senses*—Tinnitus and vertigo ha been reported occasionally. *Local reactio* —Excellent local tolerance demonstrated intramuscularly administered Lincoc (lincomycin hydrochloride). Reports of pa following injection have been infreque Intravenous administration of Lincocin 250 to 500 ml of 5% glucose in distill water or normal saline has produced local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *500 r* Capsules—bottles of 24 and 100. *Ster Solution, 300 mg per ml*—2 and 10 ml via and 2 ml syringe. *Syrup, 250 mg per 5* —60 ml and pint bottles.

For additional product information, consu the package insert or see your Upjol representative.

MED B-6-S (KZL-7) JA71-16

The Upjohn Company
Kalamazoo, Michigan 49001

Upjoh

He won't resist feeling better with Mylanta®

Because the taste is good.

- □ promptly relieves hyperacidity
- □ also relieves fullness and bloating
- □ non-constipating



LIQUID **MYLANTA**® TABLETS

aluminum and magnesium hydroxides with simethicone

STUART PHARMACEUTICALS | Division of ICI America Inc. | Wilmington, Del. 19899 | Pasadena, Calif. 91109



a new outlook in chronic pain

of moderate to severe intensity

Though Talwin® can be compared to codeine in analgesic efficacy, it is not a narcotic. So patients receiving Talwin for prolonged periods face fewer of the consequences you've come to expect with narcotic analgesics. And that, in the long run, can mean a better outlook for your chronic-pain patient.

Talwin Tablets are:

- **Comparable to codeine in analgesic efficacy:** one 50 mg. Talwin Tablet appears equivalent in analgesic effect to 60 mg. (1 gr.) of codeine. Onset of significant analgesia usually occurs within 15 to 30 minutes. Analgesia is usually maintained for 3 hours or longer.
- **Tolerance not a problem:** tolerance to the analgesic effect of Talwin Tablets has not been reported, and no significant changes in clinical laboratory parameters attributable to the drug have been reported.
- **Dependence rarely a problem:** during three years of wide clinical use, only a few cases of dependence have been reported. In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.
- **Not subject to narcotic controls:** convenient to prescribe—day or night—even by phone.
- **Generally well tolerated by most patients:** infrequently cause decrease in blood pressure or tachycardia; rarely cause respiratory depression or urinary retention; seldom cause diarrhea or constipation. If dizziness, lightheadedness, nausea or vomiting are encountered, these effects tend to be self-limiting and to decrease after the first few doses. (See last page of this advertisement for a complete discussion of adverse reactions and a brief discussion of other Prescribing Information.)

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic

a new outlook in chronic pain

of moderate to severe intensity



Contraindications: Talwin, brand of pentazocine (as hydrochloride), should not be administered to patients who are hypersensitive to it.

Warnings: *Head Injury and Increased Intracranial Pressure.* The respiratory depressant effects of Talwin and its potential for elevating cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a preexisting increase in intracranial pressure. Furthermore, Talwin can produce effects which may obscure the clinical course of patients with head injuries. In such patients, Talwin must be used with extreme caution and only if its use is deemed essential.

Usage in Pregnancy. Safe use of Talwin during pregnancy (other than labor) has not been established. Animal reproduction studies have not demonstrated teratogenic or embryotoxic effects. However, Talwin should be administered to pregnant patients (other than labor) only when, in the judgment of the physician, the potential benefits outweigh the possible hazards. Patients receiving Talwin during labor have experienced no adverse effects other than those that occur with commonly used analgesics. Talwin should be used with caution in women delivering premature infants.

Drug Dependence. There have been instances of psychological and physical dependence on parenteral Talwin in patients with a history of drug abuse and, rarely, in patients without such a history. Abrupt discontinuance following the extended use of parenteral Talwin has resulted in withdrawal symptoms. There have been a few reports of dependence and of withdrawal symptoms with orally administered Talwin. Patients with a history of drug dependence should be under close supervision while receiving Talwin orally.

In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.

Acute CNS Manifestations. Patients receiving therapeutic doses of Talwin have experienced, in rare instances, hallucinations (usually visual), disorientation, and confusion which have cleared spontaneously within a period of hours. The mechanism of this reaction is not known. Such patients should be very closely observed and vital signs checked. If the drug is reinstituted it should be done with caution since the acute CNS manifestations may recur.

Usage in Children. Because clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Precautions: *Certain Respiratory Conditions.* Although respiratory depression has rarely been reported after oral administration of Talwin, the drug should be administered with caution to patients with respiratory depression from any cause, severe bronchial asthma and other obstructive respiratory conditions, or cyanosis.

Impaired Renal or Hepatic Function. Decreased metabolism of the drug by the liver in extensive liver disease may predispose to accentuation of side effects. Although laboratory tests have not indicated that Talwin causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment.

Myocardial Infarction. As with all drugs, Talwin should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects of Talwin on the sphincter of Oddi, the drug should be used v caution in patients about to undergo surgery of the biliary tr

Patients Receiving Narcotics. Talwin is a mild narcotic antagor Some patients previously receiving narcotics have experienced v withdrawal symptoms after receiving Talwin.

CNS Effect. Caution should be used when Talwin is administe to patients prone to seizures; seizures have occurred in a few s patients in association with the use of Talwin although no cause effect relationship has been established.

Adverse Reactions: Reactions reported after oral administra of Talwin include *gastrointestinal:* nausea, vomiting; infreque constipation; and rarely abdominal distress, anorexia, diarr *CNS effects:* dizziness, lightheadedness, sedation, euphoria, h ache; infrequently weakness, disturbed dreams, insomnia, sync visual blurring and focusing difficulty, hallucinations (see *A CNS Manifestations* under WARNINGS); and rarely tremor, i tability, excitement, tinnitus. *Autonomic:* sweating; infreque flushing; and rarely chills. *Allergic:* infrequently rash; and ra urticaria, edema of the face. *Cardiovascular:* infrequently decr in blood pressure, tachycardia. *Other:* rarely respiratory depress urinary retention.

Dosage and Administration: *Adults.* The usual initial adult dos 1 tablet (50 mg.) every three or four hours. This may be incre to 2 tablets (100 mg.) when needed. Total daily dosage should exceed 600 mg.

When antiinflammatory or antipyretic effects are desired in a tion to analgesia, aspirin can be administered concomitantly v Talwin.

Children Under 12 Years of Age. Since clinical experience in c dren under 12 years of age is limited, administration of Talwi this age group is not recommended.

Duration of Therapy. Patients with chronic pain who have rece Talwin orally for prolonged periods have not experienced w drawal symptoms even when administration was abruptly dis tinued (see WARNINGS). No tolerance to the analgesic effect been observed. Laboratory tests of blood and urine and of liver kidney function have revealed no significant abnormalities a prolonged administration of Talwin.

Overdosage: *Manifestations.* Clinical experience with Talwin o dosage has been insufficient to define the signs of this condition.

Treatment. Oxygen, intravenous fluids, vasopressors, and o supportive measures should be employed as indicated. Assiste controlled ventilation should also be considered. Although na phine and levallorphan are *not* effective antidotes for respira depression due to overdosage or unusual sensitivity to Talwin, enteral naloxone (Narcan®, available through Endo Laboratorie a specific and effective antagonist. If naloxone is not available, enteral administration of the analeptic, methylphenidate (Ritali may be of value if respiratory depression occurs.

Talwin is not subject to narcotic controls.

How Supplied: Tablets, peach color, scored. Each tablet cont Talwin (brand of pentazocine) as hydrochloride equivalent to 50 base. Bottles of 100.

Winthrop Winthrop Laboratories, New York, N. Y. 10016 (15

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic

140/90 is normal blood pressure...or is it?

An extensive study based on nearly 4 million life insurance policies suggests that a blood pressure reading of 140/90 requires close medical supervision.

Study Findings. Twelve years ago the Society of Actuaries reported on an extensive study based on the lives and deaths represented by almost 4 million life insurance policies. From this vast survey—"The Build and Blood Pressure Study"[1]—insurance experts concluded that:

- Blood pressure above 140/90 is accompanied by increased morbidity and requires close medical attention.
- Even small increments in either systolic or diastolic blood pressure progressively and steeply shorten life expectancy.

Other Studies. Studies conducted with large numbers of patients since that time have echoed the above findings. Two studies published in 1970—the VA Cooperative Study Group on "Effects of Treatment on Morbidity in Hypertension"[2] and the "Framingham Study"[3]—suggest that treatment of even mild hypertension may, over time, offer significant benefits to the patient.

Another Point of View. Although a growing body of studies suggests that treatment of mild hypertension is warranted, medical opinion is not unanimous. Some clinicians recommend that drug treatment for mild hypertension be reserved for patients with additional risk factors such as smoking, high cholesterol levels, heart or kidney involvement, or a family history of vascular disease. Dr. Walter M. Kirkendall stated this position in his recent paper "What's With Hypertension These Days?"[4] Discussing the management of hypertension in patients with a sustained diastolic pressure up to 100 mm Hg, he said: "Generally, I do not recommend antihypertensive therapy unless patient's blood pressure approaches the upper limit for the group and a number of adverse factors exist, such as male sex, family history of vascular disease, youth, evidence of heart or kidney involvement."



Drug Therapy for Hypertension. Although opinion varies on when to start drug therapy for mild hypertension, many physicians agree that treatment should start with a thiazide diuretic such as HydroDIURIL. For the adult patient, the usual starting dosage is 50 mg b.i.d. Dosage adjustments are recommended as the patient responds to treatment. The patient whose therapy begins with HydroDIURIL frequently can continue to benefit from it, because HydroDIURIL usually maintains its antihypertensive effect even when therapy is prolonged.

MSD
MERCK
SHARP &
DOHME

25- and 50-mg tablets

HydroDIURIL®

(Hydrochlorothiazide|MSD)

Therapy to Start With

For a brief summary of prescribing information, please see next page.

1. Society of Actuaries, *The Build and Blood Pressure Study*, 1959.
2. Veterans Administration Cooperative Study Group on Antihypertensive Agents, "Effects of Treatment on Morbidity in Hypertension," JAMA *213*:1143-1152, Aug. 17, 1970.
3. Kannel, William B., *et al.* "Epidemiologic Assessment of the Role of Blood Pressure in Stroke—The Framingham Study," JAMA *214*:301-310, Oct. 12, 1970.
4. Kirkendall, Walter M.: "What's With Hypertension These Days?" Consultant, Jan. 1971.

25- and 50-mg tablets

HydroDIURIL®

(Hydrochlorothiazide|MSD)

Therapy to Start With

Drug Therapy for Hypertension. Although opinion varies on when to start drug therapy for mild hypertension, many physicians agree that treatment should start with a thiazide diuretic such as HydroDIURIL. For the adult patient, the usual starting dosage is 50 mg b.i.d. Dosage adjustments are recommended as the patient responds to treatment. The patient whose therapy begins with HydroDIURIL frequently can continue to benefit from it, because HydroDIURIL usually maintains its antihypertensive effect even when therapy is prolonged.

CONTRAINDICATIONS: Anuria; increasing azotemia and oliguria during treatment of severe progressive renal disease. Known sensitivity to this compound. Nursing mothers; if use of drug is deemed essential, patient should stop nursing.

WARNINGS: May precipitate or increase azotemia. Use special caution in impaired renal function to avoid cumulative or toxic effects. Minor alterations of fluid and electrolyte balance may precipitate coma in hepatic cirrhosis.

When used with other antihypertensive drugs, careful observation for changes in blood pressure must be made, especially during initial therapy. Dosage of other antihypertensive agents, especially ganglion blockers, must be reduced by at least 50% because HydroDIURIL potentiates their action.

Stenosis and ulceration of the small bowel causing obstruction, hemorrhage, and perforation have been reported with the use of enteric-coated potassium tablets, either alone or with nonenteric-coated thiazides. Surgery was frequently required, and deaths have occurred. Such formulations should be used only when indicated and when dietary supplementation is impractical. Discontinue immediately if abdominal pain, distention, nausea, vomiting, or gastrointestinal bleeding occurs.

Thiazides cross placenta and appear in cord blood. In women of childbearing age, potential benefits must be weighed against possible hazards to fetus, such as fetal or neonatal jaundice, thrombocytopenia, and possibly other adverse reactions which have occurred in the adult.

The possibility of sensitivity reactions should be considered in patients with a history of allergy or bronchial asthma. The possibility of exacerbation or activation of systemic lupus erythematosus has been reported for sulfonamide derivatives, including thiazides.

PRECAUTIONS: Check for signs of fluid and electrolyte imbalance, particularly if vomiting is excessive or patient is receiving parenteral fluids. Warning signs, irrespective of cause, are dryness of mouth, thirst, weakness, lethargy, drowsiness, restlessness, muscle pains or cramps, muscular fatigue, hypotension, oliguria, tachycardia, and gastrointestinal disturbances. Hypokalemia may develop (especially with brisk diuresis) in severe cirrhosis; with concomitant steroid or ACTH therapy; or with inadequate electrolyte intake. Digitalis therapy may exaggerate metabolic effects of hypokalemia, especially with reference to myocardial activity. Hypokalemia may be avoided t treated by use of potassium chloride or giving foo with a high potassium content. Similarly, any chloric deficit may be corrected by use of ammonium chlori (except in patients with hepatic disease) and large prevented by a near normal salt intake. Hypochlorem alkalosis occurs infrequently and is rarely severe. severely edematous patients with congestive failure renal disease, a low salt syndrome may occur if dieta salt is unduly restricted, especially during hot weathe

Thiazides may increase responsiveness to tubocu rarine. The antihypertensive effect of the drug may b enhanced in the postsympathectomy patient. Arteri responsiveness to norepinephrine is decreased, nece sitating care in surgical patients. Discontinue drug 4 hours before elective surgery. Orthostatic hypotensio may occur and may be potentiated by alcohol, barbi urates, or narcotics.

Pathological changes in the parathyroid glands wit hypercalcemia and hypophosphatemia have been see in a few patients on prolonged thiazide therapy. Th effect of discontinuing thiazide therapy on serum ca cium and phosphorus levels may be helpful in asses ing the need for parathyroid surgery in such patient Parathyroidectomy has elicited subjective clinical im provement in most patients, but has no effect o hypertension. Thiazide therapy may be resumed aft surgery.

Use cautiously in hyperuricemic or gouty patient gout may be precipitated. May affect insulin requir ments in diabetics; may induce hyperglycemia an glycosuria in latent diabetics.

ADVERSE REACTIONS: Rare reactions includ thrombocytopenia, leukopenia, agranulocytosis, apla tic anemia, cholestasis, and pericholangiolitic hepatiti Nausea, vomiting, diarrhea, dizziness, vertigo, pare thesias, transient blurred vision, sialadenitis, purpur rash, urticaria, photosensitivity, or other hypersens tivity reactions may occur. Cutaneous vasculitis pr cipitated by thiazide diuretics has been reported i elderly patients on repeated and continuing exposu to several drugs. Scattered reports have linke thiazides to pancreatitis, xanthopsia, neonatal throm bocytopenia, and neonatal jaundice. When advers reactions are moderate or severe, the dosage c thiazides should be reduced or therapy withdraw

For more detailed information, consult your MSD Representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD
MERCK SHARP & DOHME

IN ASTHMA
IN EMPHYSEMA



optional therapy

THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications are listed above. MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with ½ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula
First choice

MUDRANE-2
When ephedrine is too exciting or is contraindicated

MUDRANE GG
During pregnancy or when K.I. is contraindicated or not tolerated

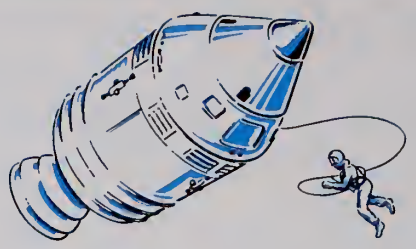
MUDRANE GG-2
A counterpart for Mudrane-2

MUDRANE GG ELIXIR
For pediatric use or where liquids are preferred

Clinical specimens available to physicians.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, *300 mg.;* SODIUM ACID PHOSPHATE, *500 mg.*

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

Prompt relief of pain is a lot of what the practice of medicine is all about... East or West.

In much of the Far East, the analgesic efficacy of Empirin® Compound with Codeine would probably be measured against acupuncture, an ancient and traditional therapeutic system.

In America, codeine sets such a high standard for oral analgesia, that it has become a criterion in terms of which other major oral analgesics are most often measured.

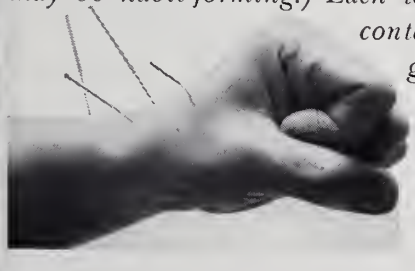
Synthetic and other oral analgesics may offer some of the properties of codeine, but not one can provide both its benefits and potency. And codeine provides an antitussive bonus.

Empirin Compound with Codeine is the most widely used, and probably the most pharmaceutically elegant analgesic preparation providing codeine. It's the time-tested combination for predictable pain relief . . . whether the pain is visceral or musculoskeletal; acute or chronic.



CIII **New prescription flexibility.** At your discretion, and where state law permits, a prescription for Empirin Compound with Codeine may now be refilled up to five times in six months.

Empirin Compound with Codeine No. 3 contains codeine phosphate (32.4 mg.) gr. ½. No. 4 contains codeine phosphate* (64.8 mg.) gr. 1. *(Warning—may be habit-forming.) Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½. Bottles of 100 and 1000.*



But for relief of Western pain

EMPIRIN® COMPOUND C CODEINE

Burroughs Wellcome Co., Research Triangle Park, North Carolina 27709

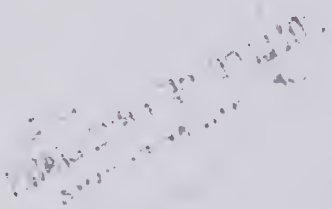
Librium®
(chlordiazepoxide HCl)
and safety

Librium (chlordiazepoxide HCl), after more than a decade of wide clinical use, continues to reflect a wide margin of safety. In general use, the most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated.

Antianxiety effectiveness: Demonstrated in a broad range of psychologic and physical dysfunctions; indicated when reassurance and counseling are not enough and until, in the physician's judgment, anxiety has been reduced to tolerable, appropriate levels.

Effect on mental acuity: Usually minimal on proper maintenance dosage. (See Warnings in summary of prescribing information.)

Concomitant use: Is used as adjunctive antianxiety therapy concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, antihypertensive agents, diuretics and vasodilators.



in relief of clinically significant anxiety

Librium®
(chlordiazepoxide HCl)

5-mg, 10-mg, 25-mg capsules
up to 100 mg daily in severe anxiety

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Supplied: Librium capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

VOLUME 70 JULY 1972 NUMBER 7

The Journal of The KENTUCKY Medical Association



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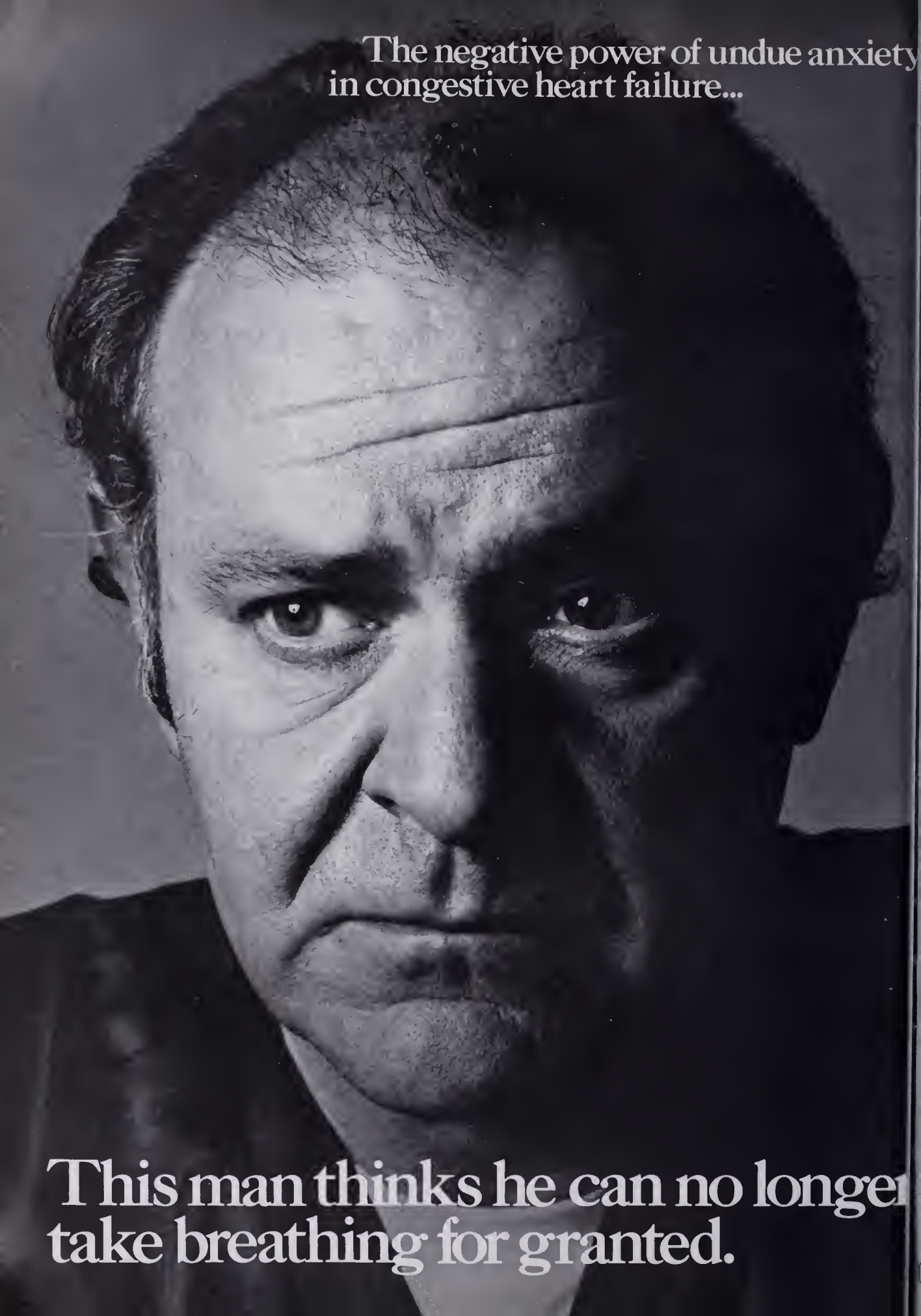
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KMA 1972 ANNUAL MEETING
September 19-21
Convention Center, Louisville


The negative power of undue anxiety
in congestive heart failure...
This man thinks he can no longer
take breathing for granted.

Typical of many patients with congestive heart failure, he also suffers from severe anxiety, a psychic factor that may influence the character and degree of his symptoms, such as dyspnea. His apprehension may also deprive him of the emotional calm so important in maintenance therapy.

MDS

Aid in rehabilitation

Specific medical and environmental measures are often enhanced by the antianxiety action of adjunctive Libritabs (chlordiazepoxide). Libritabs can also facilitate treatment of the tense convalescent patient until antianxiety therapy is no longer required. Whereas in geriatrics the *usual daily dosage* is 5 mg two to four times daily, the *initial dosage* in elderly and debilitated patients should be limited to 10 mg or less per day, adjusting as needed and tolerated.

Concomitant use with primary agents

Libritabs is used concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, diuretics, antihypertensives, vasodilators and oral anticoagulants, whenever excessive anxiety or emotional tension adversely affects the clinical condition or response to therapy. Although clinical studies have not established a cause and effect relationship, physicians should be aware that variable effects on blood coagulation have been reported very rarely in patients receiving oral anticoagulants and chlordiazepoxide HCl.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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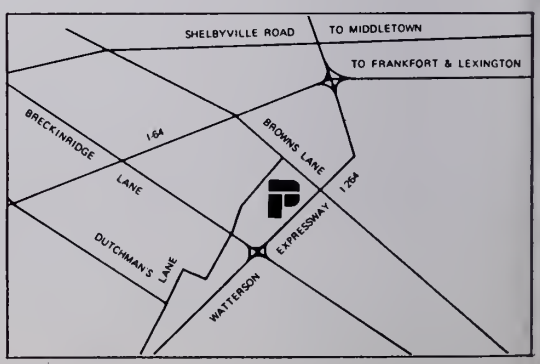
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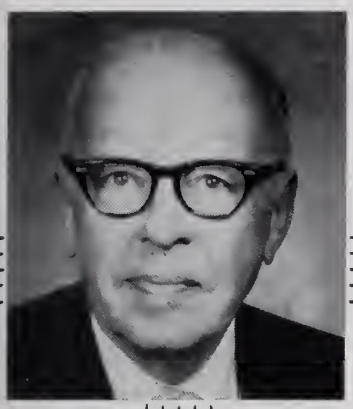
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MESSAGE FROM THE PRESIDENT



NINETEEN Kentucky Medical Association members and 16 Auxiliary members visited our Congressmen in Washington on May 15th and 16th. The evening of the 15th was spent in the AMA office being briefed by the staff on the Congressional scene regarding medical legislation. The next day was spent visiting our Congressmen in their offices in small groups. In the evening there was a dinner for the Congressmen and their wives at the Mayflower Hotel.

What is accomplished by these visits? Actually there is no direct answer, but visiting with our Congressmen in Washington at least gives them visible evidence that we are interested. Next year when health legislation is in full swing, I hope there will be a much larger contingent from KMA and the Auxiliary in Washington. The visits to the legislators give them a chance to get information; there is no "hard sell" on our part. The dinner is very much enjoyed by the legislators and their wives and the assistants and their wives because, again, there is no attempt at indoctrination. Next year we hope to spend more time with the AMA staff and also to meet with an undersecretary of HEW for information.

Next year promises to be the most critical year in Congress as to how you are going to practice medicine in the future. You should plan to attend the Washington meeting. The time of the meeting is to be set when it seems most advantageous for us to be present.

John S Harter

Continuing Educational Opportunities

From The

KMA Postgraduate Medical Education Office

U of L Pediatric Dept. Plans Newborn Symposium, Nov. 2-3

The Sixth Annual Newborn Symposium, sponsored by the Department of Pediatrics of the University of Louisville School of Medicine, will be held November 2-3 at the School's Health Sciences Center Auditorium.

Participants for the two-day event will be Heinz Eichenwald, M.D., Sheldon B. Korones, M.D., Fred S. Rosen, M.D., John Sever, M.D. and Warren E. Wheeler, M.D. Members of the U of L Department of Pediatrics will also participate in the program.

Doctor Wheeler will deliver the 1972 Eighth Annual Louisville Pediatric Lecture on November 1. For further information contact: Billy F. Andrews, M.D., 226 East Chestnut Street, Louisville, Kentucky 40202.

IN KENTUCKY

JULY

19-20 Scientific Seminar, Kentucky Academy of Family Practice, Cumberland Falls Dupont Lodge

SEPTEMBER

19-21 KMA ANNUAL MEETING, Convention Center and Stouffer's Louisville Inn

IN SURROUNDING STATES

SEPTEMBER

10-16 Postgraduate course, Clinical Gastroenterology, Castle Harbour Hotel, Bermuda. Contact: Vernon Smith, M.D., 301 St. Paul Place, Baltimore, Md. 21202

11-12 AMA Annual Congress on Occupational Health, Drake Hotel, Chicago

20-23 Annual meeting, American Thyroid Association, Inc., Drake Hotel, Chicago

OCTOBER

2-6 Annual clinical congress, American College of Surgeons, Fairmont Hotel, San Francisco

NOVEMBER

13-16 Annual meeting, Southern Medical Association, New Orleans

13-16 Scientific Assembly, Interstate Postgraduate Medical Association, Washington-Hilton Hotel, Washington, D.C.

ACS Clinical Meeting Planned Oct. 2-6 in San Francisco

The 58th Annual Clinical Congress of the American College of Surgeons will be held in San Francisco, October 2-6, at the Fairmont Hotel.

Sixteen postgraduate courses accredited by the AMA Council on Medical Education, 50 panel discussions and symposia, seven operative telecasts from San Francisco General Hospital and more than 250 research-in-progress reports are only a few features of the scientific program.

For additional information contact the American College of Surgeons, 55 East Erie Street, Chicago, Illinois 60611.

SEND IN MEETING INFORMATION

Many medical organizations are setting dates for their fall and winter meetings. At the same time they are choosing the topics to be discussed, arranging for speakers and planning programs.

The Continuing Medical Education office of the Kentucky Medical Association would like to urge these societies and organizations to notify this office of these dates and topics so they can be added to the "Continuing Education Opportunities" calendar in *The Journal*. In this way conflicts in dates can be avoided and a wider audience can be informed of these upcoming meetings.

Please send such information, when available, to the KMA Continuing Medical Education Office, 3532 Ephraim McDowell Drive, Louisville, Ky. 40205.

PUBLIC HEALTH PAGE

Kentucky's New Medical Examiners Program†

WILLIAM P. MCELWAIN, M.D., M.P.H.
Commissioner of Health
Commonwealth of Kentucky

IN 1970, there were 33,127 deaths reported in Kentucky. Of these, 6,323 or 19% were unattended by a physician. It is left to public authority to certify the cause of death in such cases; and historically, this function has gone to the coroner, who in Kentucky, is an elected official. In most instances, the coroner is not a physician, and does not possess the scientific expertise for accurately determining the cause of death. In Kentucky, the only qualifications specified for the office of coroner are that he be at least 24 years of age; a resident of the State for two years; of the county for one year; and of the precinct for six months.

It has long been recognized that the coroner needs medical assistance in determining the cause of death, but programs to provide this service, have been slow in evolving. The legal basis for Kentucky's Medical Examiner Program was provided by the 1968 Legislature when it enacted KRS 72.210 to 72.991. This legislation was actively supported by many organizations and individuals, including the Kentucky Medical Association, the Kentucky Society of Pathologists, coroners and other law enforcement agencies. The legislation provides for the establishment within the Department of Health of a Medical Examiner Services and Post Mortem Examination Section. Duties of this section are stated as follows:

1. Provide medical assistance, including payment for autopsies to coroners in investigating deaths.
2. Provide or contract for laboratory facilities.
3. Provide for keeping of records related to the Medical Examiner Program.
4. Provide such other functions as required by statute and rules and regulations of the State Board of Health.

The legislation provides for an advisory committee consisting of the Commissioners of Health and Public Safety as ex officio members and five additional members appointed by the Commissioner of Health. This Commission has been established and it is actively functioning.

Until recently, Kentucky's Medical Examiner Program has been dormant, since no funds were appropriated for implementing the program when the enabling legislation was passed in 1968. Limited funds were recently made available, however, by a project grant through the Kentucky Crime Commission. Although this grant was inadequate to provide for fully implementing the Medical Examiner Program, it has enabled the Department to provide limited medical examiner services.

Jerry Francisco, M.D., Chief Medical Examiner for the State of Tennessee, has been employed as consultant for the program. Doctor Francisco, a certified forensic pathologist with considerable experience in legal medicine, will serve as Chief Consultant to the Medical Examiner Program and assist in the detailed planning for expansion of the program. He will also conduct statewide technical seminars for regional and local medical examiners and coroners.

Regional medical examiners have been appointed to serve all geographic regions of the

State with the exception of one. It is hoped that this region will be covered shortly. Regional medical examiners are practicing pathologists who have expressed an interest in forensic medicine and are willing to serve in this capacity. We are presently in the process of designating a local medical examiner for each county. The local medical examiner will be a practicing physician in the county who will provide medical consultation to the local coroner at the county level.

When a county coroner has a case in which he needs medical consultation, he will first seek assistance from the local medical examiner. It should be possible to resolve a significant number of coroners' cases at this level. If additional consultation is required, however, the regional medical examiner would enter the investigation and determine whether an autopsy is indicated. If further expertise in forensic pathology is required, the regional medical examiner may seek consultation from Doctor Francisco.

Limited funding for the program has necessitated restricting services, but it is anticipated that the program will be significantly expanded during the 1972 fiscal year. Future plans provide for the employment of additional regional medical examiners and for increasing considerably the number of consultations and autopsies available to local coroners in order to more realistically meet their needs. Expansion of existing toxicology laboratory services must also be made to provide support to the Medical Examiner Program. The Division of Laboratory Services presently has the capability of determining blood alcohol levels, of identifying common barbiturates from clinical specimens and of determining carbon monoxide. During the next fiscal year, the Laboratory will concentrate on the development of methods for the identification of other toxic agents.

Although the program has only been in operation for approximately six weeks, 22 autopsies have been approved for payment. Several clinical specimens related to coroners' cases have been submitted to the Laboratory for examination.

We believe that the Medical Examiner Program is important to the State from the standpoint of both public health and law enforcement. There are believed to be many deaths caused by undetermined conditions of public health significance. Investigation of these deaths should provide significant information in planning comprehensive public health programs. The importance of the program to law enforcement is obvious.

---

†*This article was prepared by: B. F. Brown, M.D., M.P.H., Director, Division of Laboratory Services, Kentucky State Department of Health, 275 East Main Street, Frankfort, Kentucky 40601*

CLINICAL DIRECTOR to administer the medical aspects of a progressive 1,200 resident facility for the mentally retarded. Will be responsible to the Superintendent for all aspects of the clinical service and supervision of staff. Specialists in pediatrics, neurology or internal medicine will be preferred. Board certification is desirable. Eligibility for Michigan licensure required. Salary ranges from $29,211 to $36,372 with starting salary dependent on qualifications. Housing currently available at nominal cost. Excellent fringe benefit and retirement program through Michigan's outstanding Civil Service. The facility is located in a small, progressive community in lower Michigan which provides a style of life many would like to recapture yet it is close enough to cities such as Saginaw, Flint and Detroit to provide the shopping, entertainment and cultural life of the big city. To apply send vitae to the Superintendent, Caro State Home and Training School, Caro, Michigan 48723.

AN EQUAL OPPORTUNITY EMPLOYER

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 25-year-old white married gravida 3, para 1, Ab 1, private patient had a last normal menstrual period of 3-6-69 and an EDC of 12-13-69. Her first delivery was by Cesarean section of an 8 lb male from frank breech presentation because of fetopelvic disproportion confirmed by x-ray. A fibroid was removed and an elective appendectomy was done. She had also had a back fusion for unknown reasons 13 years ago. She had received a blood transfusion at the time of the back fusion, but did not require transfusion with her delivery. A D & C and conization of the cervix had been done in 1968.

This pregnancy was uncomplicated and she was seen by her physician as well as the general surgeon who performed the first Cesarean section who both confirmed the correct due date. It was planned that an elective repeat Cesarean section be done 12-1-69. On admission her hemoglobin was 13.3 gm %, hematocrit 40%, RBC 4.44, WBC 5,750. Cesarean section was performed using light general anesthesia of a 5 lb 9 oz infant through a low cervical incision. There were no complications and transfusion was not necessary. She was transferred to the recovery room in good condition. When seen later in the morning in her room she was quite upset. She insisted she had been awake during the delivery and had felt her abdomen being pushed upon. She was breathing deeply at frequent intervals and appeared apprehensive. Sedation with Sodium Seconal I.M. was given.

The evening following surgery her temperature rose to 102.4° but by the next morning her condition was thought to be satisfactory. Because of penicillin sensitivity she was treated with Loridine I.M. every six hours. She complained of right subdiaphragmatic pain and pain in the right shoulder. This was thought to be due to air beneath the diaphragm. There was no abdominal distention and her wound appeared normal. However, she remained apprehensive and still breathed deeply. Her chest was carefully examined and no abnormalities were noted. A hematocrit and hemoglobin on the afternoon of the first PO day were normal. However, when seen that evening at 7:00 p.m. her abdomen was quite distended and she complained of difficulty in breathing. Her temperature was 103° and her pulse was rapid. Her chest was re-examined and found to be normal. An enema was ordered to relieve the abdominal distention and was successful. At 9:00 p.m. it was noted that her lips and nails were cyanotic and the nurses stated she had coughed up some blood tinged sputum. Her chest findings were "remarkable for their absence". She was placed in an oxygen tent where her color immediately improved. Her temperature which had been 104° decreased to 101° and by midnight she stated she felt much better.

At 2:30 a.m. of the same night (40 hours postoperatively) she became suddenly worse. Her lips, fingernails and toenails became quite cyanotic. Her physician was called and diagnosed acute respiratory failure with air hunger. Careful examination of the chest failed to reveal any positive findings. Her blood pressure remained normal and a medical consultant was called. The medical consultant made the diagnosis of acute pulmonary embolism and ordered immediate digitalization and heparinization. Nasal oxygen was given in addition to the oxygen tent.

She showed little improvement that morning (48 hours postoperatively), and became irrational. Portable x-rays were obtained which showed pulmonary edema. Her condition worsened and her blood pressure began to fall. She became more cyanotic and terminally

coughed up thick mucus which was blood stained. An autopsy was obtained.

The right lung weighed 650 grams, the left 600 grams. Both were purplish red and the pleural surfaces were granular. There was increased density of both lungs. There were no pleural adhesions and no pulmonary emboli. The remaining gross findings were normal. The microscopic findings of the lungs revealed some "heart failure cells" and some well formed hyalin membranes with polymorphonuclear leukocytes and remnants of necrotic alveolar lining cells. There were a few mononuclear cells within some of the alveolae and many of these same cells were noted within the thickened septa. In some areas there was significant alveolar epithelization giving a honey-combed appearance. These cells were cuboidal to flattened and in rare instances almost columnar. There was an increase in the number of alveolar capillaries and marked thickening of the alveolar septa by fibroblastic proliferation and muscular hyperplasia. Large areas were completely fibrotic with no evidence of residual alveolar space. There was no apparent bronchiolar obstruction. The small bronchi and bronchioles showed surrounding muscular hyperplasia in addition to hyalinization and thickening of the basement membrane.

The final diagnosis was: (1) acute and chronic, diffuse interstitial pneumonia, (2) pulmonary edema, severe, (3) pleural effusion, bilateral, (4) congestion acute, generalized, (5) right ventricular hypertrophy.

The Committee classified this as an indirect obstetric death with probable unpreventable factors. There were some findings which suggested a pulmonary embolus, specifically the blood tinged sputum. However, this was not borne out by autopsy. The rare condition which the patient actually had, Hamman-Rich syndrome, is untreatable and ultimately fatal. It may have been improved somewhat by the pregnancy because of the increased circulating cortisol levels normally found during pregnancy. Cortisone therapy may have prolonged her course, but it is a rapidly progressive lung disorder with no known therapy. Its response to pregnancy is similar to lupus erythematosus in that exacerbations are common in the immediate postpartum period. For this reason it was classified as probably unpreventable. There was criticism of scheduling a section 13 days in advance of her correct due date rather than waiting for the infant to gain more maturity. A 5 lb 9 oz infant is probably a premature for this patient.

Annual Meeting

Scientific Program

Outline on Page 551



THE INSURANCE PAGE



Is This A Necessary Expense?

AS THE cost of medical care increases, more and more people will be asking, "IS THIS A NECESSARY EXPENSE?". Speaking as idealists, most doctors would say that they intend to treat the wealthy patient and the poor patient the same, yet realistically they know that the wealthy patient demands more time and more attention and wants the "frills" of medical practice, while the patient on a limited budget is content with the bare essentials of medical treatment. If both make a satisfactory recovery from their illness, both will be satisfied and think that their money was well spent.

The same is true in the automotive industy. The man on a limited budget will choose the small economy model while his wealthy cousin will choose the deluxe model with all the extras. Both automobiles will make the same trip, be governed by the same road conditions and speed limits, and both owners will be satisfied that their money has been well spent.

Since the advent of third party payments of medical expenses, the picture has changed somewhat. Since medical care is "paid for", the patient wants the deluxe model with all the extras. He no longer is satisfied with the bare essentials of medical care. This places the doctor in the position of having to decide what are the bare essentials and what are the extras.

Ideally speaking, the physician would prefer not to know who has insurance and who has not, but in this age he assumes everyone has some form of prepayment of hospital medical care. Unnecessary expense should be avoided, regardless of who pays the bill.

Recently on a routine evening hospital visit, the nurse informed the writer that one of his patients had refused a chest x-ray which had been ordered. When we entered the patient's room, he stated that he had probably been wrong in refusing the x-ray, but the physician had not mentioned that the x-ray was to be done and he did not see the need for it. He asked why the x-ray was necessary. When he received a simple explanation, he readily agreed that the x-ray should be made. When the x-ray was reported as normal, he was still satisfied that it should have been done.

This patient was within his rights in asking, "IS THIS A NECESSARY EXPENSE?". Is the third party payer equally justified in asking, "IS THIS A NECESSARY EXPENSE?"

At the 1971 annual session of KMA, the following statement appeared in the report of the Advisory Committee to Blue Shield: "Following the discussion on Utilization Review and a data gathering system, the Committee felt it imperative that physicians should have more information as to the charges by hospitals for various services ordered by physicians and unanimously recommends that KMA, working with the Kentucky Hospital Association, request each hospital in Kentucky to provide a list of charges to the members of the medical staff. Knowledge of these charges could affect a physician's decision when ordering them."

At a subsequent meeting attended by representatives of Blue Cross and Blue Shield, the Kentucky Hospital Association, members of the Advisory Committee to Blue Shield and members of the KMA Hospital Committee, this statement was discussed. A member of the Hospital Association presented a list of charges in one Louisville hospital. This list was a large bound book which contained approximately as many listings as there are in the Louisville telephone directory, and made just about as interesting reading. It soon became apparent that the expense of presenting all the members

of this hospital staff with a copy of the charges would be an unjustified expense, and it is doubtful if any appreciable number of staff members would look at the list of charges.

It was further suggested that each attending physician be given a copy of the itemized charges when each of his patients left the hospital. Although the cost of one itemized copy may not be significant, the cost of getting an itemized copy of each patient's bill to his attending physician would amount to a considerable sum. Some physicians would not look at the charges at all and the physicians with good intentions would read a few of these and file the remainder away to study at their future leisure, and of course never see them again. IS THIS A NECESSARY EXPENSE?

It was the opinion of those attending the meeting that physicians should be acquainted with the hospital charges to the patient for all services. Probably the best way to do this would be to ask the hospital utilization committee to select one or two physicians to study a few representative itemized hospital bills of the physician's own patients and present this information for discussion at the staff meeting once or twice a year. This would serve to emphasize that only a few unnecessary expenses on each patient's bill is magnified to millions of dollars throughout the state. IS THIS EXPENSE NECESSARY?

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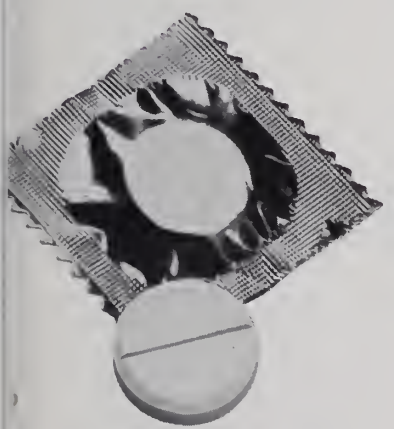


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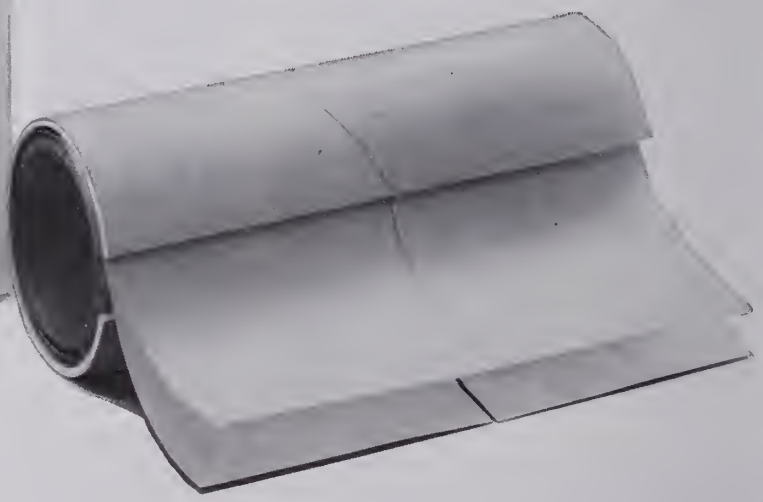
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Toxin Megacolon†

BEREL L. ABRAMS, M.D. AND NORTON G. WATERMAN, M.D.
Louisville, Kentucky

Toxic megacolon is an infrequent but lethal complication of ulcerative colitis. Two cases are reported and the literature reviewed to illustrate appropriate management.

TOXIC megacolon is the most serious and frequently fatal complication of ulcerative colitis. The diagnosis is not difficult; it is usually heralded by the worsening of the patient with the development of tachycardia, fever, more severe diarrhea, "toxemia" and abdominal distention and tenderness. The distention may be slight with decreased peristaltic activity or the patient may present with a markedly distended, diffusely tender abdomen with signs of peritonitis. These patients are acutely ill, and usually manifest some or all of the following "toxic" factors: leukocytosis, prolonged Quick prothrombin time, hypocalcemia, hypoalbuminemia, hyponatremia, hypokalemia and hypomagnesemia. The diagnosis is confirmed by a flat film of the abdomen which shows a marked distention of all or part of the colon with the transverse colon most commonly being the most dilated part.

Although the incidence of this complication is low, varying from 1.6 to 3.7%[1, 2, 8], it seems to be increasing with some authors reporting a higher incidence. The mortality is *not* low, however, and ranges from 13 to 26%[1, 2, 3, 8]. The risk of perforation is high, and in perforated cases mortality is reported at 50-100%[38]. Few physicians have a large experience with this perplexing entity. Two cases are reported and the literature reviewed to illustrate appropriate management.

Pathology and Physiology

The basic cause of the dilatation of the colon is unknown. The only factor present in all cases of toxic megacolon is the involvement of all layers of the colon with severe transmural destruction of the circular and longitudinal muscles. Although damage to the myenteric plexus has been implicated as a cause of the colonic dilatation, this has been disproven[5]. Hypokalemia, which could produce atony of smooth muscle, could be a contributing factor, but patients have not responded to potassium therapy.

Anticholinergic drugs and narcotics can be implicated as precipitating factors because of the association of toxic megacolon with the administration of these drugs. It has been suggested that in an acute fulminating colitis, the colon is somewhat more susceptible to these drugs since their administration during other times is without problems. Barium enema is frequently associated with the onset of toxic megacolon. A partial explanation may be that the intraluminal pressure during barium enema is in the range of 90 cm of water, which exceeds the pressure in an obstructive colon[5]. This pressure could decrease blood flow in an already compromised colon. The role of narcotics, anticholinergics and barium enema as precipitation factors in toxic megacolon has been previously well described by other authors[1-8].

Case #1: The patient is a 65-year-old man

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admitted to the hospital 6-2-70, with fever, abdominal cramps and bloody diarrhea. He had a 15-year history of ulcerative colitis with periodic exacerbations and remissions. Four days after admission a barium enema showed advanced ulcerative colitis with ulcerations of the transverse and upper ascending colon and shortening of the colon. These changes had progressed since his previous barium enema in 1968. Protoscopic examination confirmed the diagnosis of acute active ulcerative colitis and operation was recommended but refused. Over the next five days the patient became worse with fever, progressive abdominal distention and 10-15 bloody bowel movements a day, and marked decrease of serum albumin and total proteins.

Fifteen days post-admission, x-rays showed a markedly dilated colon, maximal in the transverse colon consistent with toxic megacolon. Because of his failure to improve under medical management and the development of toxic megacolon, the patient was taken to the operating room and a total colectomy, proctectomy and ileostomy was performed.

The patient had a rocky postoperative course characterized by gram negative sepsis, transient acute tubular necrosis and pneumonia. He was apparently recovering when he suddenly regressed mentally and lay rolled up in a little ball sucking on a wash rag and biting anybody who came near him. Psychiatric consultation led to the diagnosis of severe depression with infantile regression. He responded to conservative psychiatric management and over the next several days became oriented and actually went through different stages of mental maturation until the seventh hospital week when he was oriented, mentally clear and acted in a mature and cooperative fashion. From this point on he made an uneventful recovery, and was finally discharged home two months after admission, all incisions healing well, eating a regular diet, afebrile, and off all medications. The patient has been seen in follow-up since that time and has gained 30 lbs. He is doing quite well at home and has had no further mental difficulties.

This case illustrates that toxic megacolon can occur as an acute exacerbation of long-standing disease. It also points out some of the interesting and bizarre complications that can ensue with this disease. The barium enema may have been a factor in the development of toxic megacolon.

Case #2: The patient is a 27-year-old white woman who was admitted to the hospital on 1-9-71 with a 2-1/2 week history of nausea with occasional vomiting and diarrhea four to seven times a day. The patient had one previous mild episode in 1970, for which she was hospitalized for two days with no specific diagnostic studies done. When she was seen in surgical consultation, she had just undergone a barium enema which showed marked dilatation of the transverse colon and acute active ulcerative colitis. It was felt that the patient was developing toxic megacolon. On transfer to another hospital, the patient was in acute distress: temperature, 103.6° orally; pulse, 112; respirations, 20; blood pressure, 100/70. She appeared pale, dehydrated and the abdomen was markedly distended, but soft, with tenderness all over the abdomen. There was no real guarding or spasm, or rebound tenderness and bowel sounds were hypoactive. Hgb was 11.8 gm %; Hct, 35%; WBC count, 8,900/mm^3; chlorides, 100 mEq/L; CO_2, 32 mm/L units; potassium, 2.9 mEq/L; sodium, 146 mEq/L; BUN, 10 mgm %; and glucose, 100 mgm %.

The patient was treated with fluid and electrolyte replacement and received 600 mg of Solu-Cortef IV in divided doses, as well as 50 gm of serum albumin daily. The patient seemed to improve, but the next day abdominal films confirmed the diagnosis of toxic megacolon. The patient clinically improved except that she became more distended and nasogastric suction was started as well as antibiotics. The patient was being prepared for operation on the evening of 1-12-71 when she began to have short runs of ventricular tachycardia and bradycardia. Cardiologic consultation suggested that this represented a myocarditis of a toxic nature or secondary to her complex electrolyte imbalance (hypokalcemia, hypokalemia, and hypomagnesemia). She was treated with atropine, pronestyl, potassium and calcium chloride. With this regimen, her arrythmia seemed to come under control. However, the patient continued to have a severe bradycardia which required frequent doses of IM atropine. It became necessary to insert a transvenous

pacemaker and regular sinus rhythm was established. The patient was taken to surgery on 1-18-71, where a total colectomy and proctectomy with permanent ileostomy was performed for acute ulcerative colitis and toxic megacolon.

Postoperatively the patient did well until the eighth day when she developed a low grade fever and acute gastric dilatation. This was treated by nasogastric decompression. A right subhepatic abscess developed and was drained, and from then on she rapidly improved, made an uneventful recovery and was discharged on 2-15-71.

This illustrates that toxic megacolon can complicate the initial attack of ulcerative colitis as fully 57% of the cases in one large series[8] occurred within one to four years of the onset of disease. The barium enema in this case may well have precipitated the toxic megacolon. This is also the only documented case where a severe myocarditis occurred.

Comment

Acute dilatation of the colon complicating ulcerative colitis constitutes a potentially lethal situation. Although this is an uncommon complication, in one large series[8] it constituted 80 patients or 15% of the total patients requiring surgery for ulcerative colitis. The diagnosis is not difficult, but there is a marked inconsistency between the physical signs of abdominal distention and the degree of dilatation of the colon. *Periodic roentograms are essential,* therefore, for the early diagnosis and management of toxic megacolon. The treatment of this grave complication requires a team approach between surgeon and internist or gastroenterologist. The oral intake of fluids and food should be withheld and nasogastric or Miller-Abbott tube decompression may be necessary as well as vigorous parenteral administration of fluid and electrolytes. Whole blood is usually required as well as serum albumin. Broad coverage antibiotics are given. In our cases steroids are instituted as part of the management. If the patient is already on steroids, the dosage is increased. Sedatives are used, but anticholinergics or narcotics are not used because of their possible causative relationship with toxic megacolon.

The indications for surgery are fairly clear-cut: (1) suspicion of perforation, (2) severe continuing hemorrhage, (3) deteriorating clinical course despite 24-48 hours of maximum medical therapy or failure to improve, (4) persistent colonic dilatation beyond a week. The exact amount of time one allows the colon to remain dilated is not completely settled. Some authors believe that toxic megacolon itself is an absolute indication for surgery. Others believe that continued dilatation past one week constitutes an indication for surgery. The risk of perforation is high. In a combined series from the literature, there were 59 perforations in 135 patients, 43.7% incidence (Table I). Because of this, an aggressive attitude is advocated which consists of urgent surgery as soon as the patient can be properly prepared, unless marked improvement occurs within 24-48 hours. Earlier operation may decrease mortality and morbidity and is being increasingly advocated.

Table I

TOXIC MEGACOLON

Series	Number of Patients	Perforations	%
Peskin	9	7	77.8%
Sampson	14	9	64.3%
McMerney	36	9	25 %
Odyniec	23	9	39.1%
Prohaska	30	19	63.3%
Thomford	23	6	26.1%
	135	59	43.7%

In the United States, the type of operative procedure performed has been fairly well worked out. Ileostomy alone is mentioned only to be condemned. It does nothing to stop the progressive and rapid deterioration of the colon leading to multiple perforations and death of peritonitis. The operation of choice is total colectomy and proctectomy with a permanent ileostomy in one stage. This has been accomplished in many series with an acceptable mortality. However, if the condition of the patient prohibits this, then a two-stage procedure may be done. This is particularly true in the face of perforation and peritonitis. It is probably wise not to attempt removal of the rectum and open the presacral space to contamination or infection. A two-stage procedure is advised with closure of the rectum and copious irrigation of the peritoneal cavity

to get rid of particulate fecal matter.

Turnbull has recently advocated diverting ileostomy and decompression colostomy as the procedure of choice in toxic megacolon in those patients where sealed off perforations are suspected at laparotomy. His results are impressive but as yet have not been duplicated[10].

Many patients who recover with medical treatment require operation within a few years. Kirsner[5] reported 42 cases. Of these, 10 were perforated, which were treated with immediate surgery. Of the remaining 32, 11 had surgery while the colon was still dilated, seven had surgery later on in the same hospitalization, and five had surgery at a later date. Thus, 23 of 32 patients (72%) came to surgery. This experience is shared by others.

The possibility of impotence in males can largely be avoided by staying close to the rectum in the resection[9].

The morbidity of total colectomy and ileostomy is considerable. Sixteen of 19 patients in one series had one or more complications postoperatively[4], and another group had 18 complications in 13 patients[1]. The list included wound infection, subphrenic abscess, wound dehiscence, ischemic necrosis of ileostomy, retraction or prolapse of ileostomy, fecal fistula and septicemia. Because of the seriousness of the disease, the magnitude of the surgical procedure and the complicated postoperative course, it is felt that such surgery should only be attempted where a qualified surgeon, anesthesiologist and adequate care nursing facilities are located.

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A Survey of Water Quality of The Barren River Watershed†

WENDELL D. LOVAN, ALVIN R. HARRISON, FRANK OSBORNE,
DONNIE SPENCER AND NELSON GRAHAM*

Lexington, Kentucky

Water samples collected from the Barren River Watershed were shown to have very high levels of total coliform, fecal coliform and fecal streptococci bacteria, indicating fecal pollution of several areas within the watershed.

AS MAN begins to realize the necessity of a symbiotic relationship between himself and his environment, pollution of this environment in all its forms is receiving more attention than ever before. It seems apparent that such concern will continue to grow as more and more people come to realize the vital importance of maintaining a balance between man and the rest of nature. Water pollution is one important aspect of the entire environmental problem.

Public health officials have long associated disease with fecal pollution of water supplies as evidenced by their regulations and public warnings. The degree of fecal contamination of water has classically been determined by counting the total coliforms (bacteria which live in the gut of animals, some of which also may live on vegetation, in the soil or in insects) present in 100 ml of water in question. Most regulations pertaining to the purity of water, which may be proclaimed safe for various uses, refer to the maximum total coliforms (TC) allowable per 100 ml of water. For example, Kentucky health officials allow no more than 1,000 TC/100 ml in their public bathing areas.[1] (Nassau County on Long Island closes beaches when the count reaches 240/100 ml.[2]) The generally accepted total coliform levels for non-contact recreation (boating, fishing, etc.) and for drinking water sources requiring treatment is 5,000/100 ml.[3]

There are other tests for the determination of fecal pollution which may be performed with identical techniques and which when applied in conjunction with TC concentration, allow much more valid estimation of the actual fecal contamination. These are the fecal coliform (FC, recommended maximum of 200/100 ml for contact recreation in Kentucky)[4] and fecal streptococci (FS) counts[5, 6, 7]. All three tests (TC, FC, FS) were chosen for the pilot survey of the water quality of the Barren River Watershed in southern Kentucky.

Therefore, the purpose of this study was to determine the degree of fecal pollution of the Barren River Watershed and also to evaluate the use of TC:FC ratios and FS values as better indices of fecal contamination than TC alone as is currently employed.

The Barren River Watershed area (FIG.1) was selected as the region of study since there was no previous general study of the area, and due to its arrangement of feeder streams. The area contained streams feeding Barren River and Barren River Reservoir which carry sewage effluent from the municipalities of the area as well as those which drain only agricultural areas.

Materials and Methods

Water samples were collected from the Barren River as well as many of the other streams of the Barren River Watershed. These streams were chosen arbitrarily to limit the number of sample sites. Samples were collected at weekly intervals for four consecutive weeks.

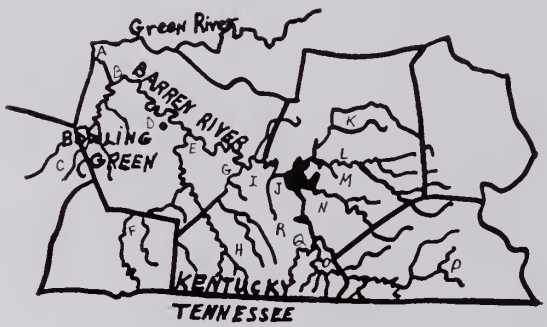
All samples were collected at an approximate mid-stream and mid-depth location. Those sample sites surrounding sewage effluents were chosen approximately 100 yards upstream and downstream from the discharge. Sample sites along the river at feeder stream

†*This investigation was supported in part by the Public Health Service Training Grant #5 AO7 AH 00174-04 from the Division of Health Manpower Educational Services. The PHS is in no way responsible for the contents of this report.*

**Medical students, University of Kentucky, College of Medicine, Lexington, Kentucky 40506*

discharges were selected about 100 yards to 1/4 mile away from the river in the stream. The exact site of sampling was determined in the field mainly by stream flow and apparent mixing of the stream or sewage effluent. Samples were also taken from the major feeder streams of Barren River Reservoir approximately 200 yards upstream from the streams' efflux into the reservoir. The boundary between reservoir and feeder streams was arbitrarily determined from topographical maps when the reservoir was at normal pool elevation of 552 feet. No samples were collected in the reservoir itself.

FIGURE 1



General Area	Site Numbers
A	1
B	2,3,4
C	5,6
D	7,8,9,10,11
E	12,13,14
F	15,16
G	17,18,19
H	20,21
I	22,23,24
J	25,26,27
K	28,29,30
L	31
M	32
N	33
O	34
P	35,36
Q	37
R	38

The mechanics of securing the water sample are as follows: A wire cage with a hinged bottom was constructed into which fitted a sterile 1 qt. (1060 ml) bottle; a rubber stopper with a screw-eye mounted in it was placed in the mouth of the bottle. The cage (with weight attached) and bottle were lowered one-half way to the bottom (the distance to the bottom having been previously determined). The string to the stopper was pulled removing the stopper and allowing the bottle to fill. The bottle in the cage was then rapidly pulled to the surface and a sterile cap placed on the bottle. In very shallow water the bottle was necessarily lowered by hand. The capped bottle was then removed from the cage and immediately placed on ice to decrease bacteria loss due to heat[8]. The samples were cultured within 24 hours after collection and usually within eight hours.

Water samples were filtered through 47 mm micropore filters with a pore size of 0.45 u. Three dilutions (undiluted, 1:100, and 1:10,000) of each sample were filtered in order to obtain the maximum practical range of bacterial content. The micropore filter pads were cultured in plastic, disposable petri dishes, fitted with 47 mm sterile absorbant pads, saturated with the appropriate selective medium.

Total coliforms were plated employing the technique described above on M-Endo broth. The plates were incubated at 36°C for 18 to 24 hours, then the red and metallic green colonies were counted[6].

Fecal coliforms were plated, utilizing the same technique, on MFC broth and were incubated at 44.5°C for 18 to 24 hours. At this time, only those colonies which displayed a blue color were counted as fecal coliforms[6].

Fecal streptococci were plated by the same technique on KF streptococcal broth with 1% TTC (2,3,5-triphenyl tetrazolium chloride) added and incubated at 36°C for 48 hours. At the end of this period all red and pink colonies visible with a 15X dissecting scope were counted[7].

Results

Table 1 presents the mean results of the quantitative bacterial cultures for each of the 38 sample sites. The mean total coliform (TC) counts for the sites varied from 12,300 for site 27 (the first site below the Barren River Reservoir Dam) to 1,420,000 for site 35 (Town Creek downstream from the Tompkinsville sewage effluent). The overall mean for all sites sampled was 282,375 TC/100 ml and the median was 196,900 TC/100 ml.

The mean fecal coliform (FC) counts ranged from 267 FC/100 ml at site 27 to 1,255,000 FC/100 ml at site 35. The overall mean and median values for all sample sites

were 96,354 FC/100 ml and 5,452/100 ml respectively.

The fecal streptococci (FS) means varied from 18 FS/100 ml at site 27 to 608,325 FS/100 ml at site 35. The overall mean and median values for the sample sites were 17,648 FS/100 ml and 937 FS/100 ml respectively.

All TC densities were greater than the federally recommended maximum for contact (1,000 TC/100 ml) and for non-contact (5,000 TC/100 ml) recreational waters. The maximum values observed for all three indices were at site 35 and the lowest values for all three were observed at site 27.

TABLE 1

MEAN BACTERIAL COUNTS
(counts/100 ml)

Site #	Location Name	Total Coliforms	Fecal Coliforms	Fecal Streptococci	TC:FC
01	Barren R. at efflux	72,667	2,975	2,776	24.4:1
02 ↓	Gasper R.	153,875	4,987	2,004	30.8:1
03 →		191,250	4,900	2,407	39:1
04 ↑		148,200	7,965	1,614	18.6:1
05 ↓	Auburn	24,[illegible]	595	159	4.1:1
06 ↑		55[illegible],000	2,700	2,210	25:1
07 ↓	Jennings Cr.	496,[illegible]	10,[illegible]	2,486	[illegible]:1
08 →		641,950	17,375	11,277	36.9:1
09 ↓↑		675,000	98,667	3,577	6.8:1
10 ↓	Bowling Green	104,000	14,[illegible]42	8.8	7.[illegible]:1
11 ↑		302,624	18,[illegible]75	2,[illegible]70	16:[illegible]
12 ↓	Drakes Cr.	265,125	868	[illegible]4	305:1
13 →		33,825	1,5[illegible]	[illegible]67	21.5:1
14 ↑		45,500	1,4[illegible]	214	31.9:1
15 ↓	Franklin	102,[illegible]	25,3[illegible]	1,070	4.1:1
16 ↑		126,000	48,[illegible]25	1,613	2.6:1
17 ↓	Bays Fork Cr.	60,1[illegible]	[illegible],6[illegible]	258	13.1:1
18 →		238,400	4,65[illegible]	368	51.3:1
19 ↑		50,300	2,800	518	[illegible].5:1
20 ↓	Scottsville	20,1[illegible]	1,[illegible]1	77	1.4:1
21 ↑		724,675	836,000	1,593	0.87:1
22 ↓	Little Diffi-	134,850	43,07[illegible]	[illegible],047	[illegible]:1
23 →	cult Cr.	925,500	773,[illegible]50	[illegible],294	1.[illegible]:1
24 ↑		41,6[illegible]	5,0[illegible]	14	8.3:1
25 ↓	Difficult Cr	42,025	1,3[illegible]	56	31.7:1
26 →		[illegible]7,[illegible]7	[illegible],[illegible]50	261	4.6:1
27 ↑		12,300	267	18	46:1
28 →	Beaver Cr.	490,[illegible]00	[illegible],731	396	[illegible].5:1
29 ↓	Glasgow	278,400	2,500	[illegible]3	111.4:1
30 ↑		[illegible]00,[illegible]7[illegible]	3[illegible],730	[illegible],[illegible]7[illegible]	[illegible]3.7:1
31 →	Skaggs Cr.	63[illegible],000	15,[illegible]70	[illegible],590	40.2:1
32 →	Dunn Cr.	143,[illegible]1[illegible]	1,930	597	74.4:1
33 →	Peter Cr.	28[illegible],[illegible]00	[illegible]5,835	2,856	[illegible].25:1
34 →	Barren R.	17,000	5,900	[illegible]4	2.9:1
35 ↓	[illegible]mpkins-	1,420,000	1,[illegible]55,000	608,3[illegible]5	[illegible].[illegible]:1
36 ↑	[illegible]ville	[illegible]0[illegible],[illegible]00	[illegible]4,675	1,[illegible]12	[illegible]:1
37 →	Long Creek	27,5[illegible]0	1,0[illegible]0	[illegible]03	[illegible].8:1
38 →	Walnut Cr.	32,400	1,3[illegible]0	[illegible]209	[illegible]:1
TOTAL MEAN		282,[illegible]75	96,3[illegible]4	17,648	[illegible].9:1
TOTAL MEDIAN		19[illegible],000	5,[illegible]52	937	[illegible]:1

* ↓=Downstream; ↑=Upstream; →=Within a stream before merging with the Barren River

Discussion

The samples from Town Creek below the Tompkinsville sewage discharge taken at weekly intervals for four consecutive weeks during June and July, 1971 averaged 1,420,000 TC/100 ml. This is seven times the average TC density above the discharge (202,500 TC/100 ml). Following the introduction of the Tompkinsville sewage effluent into Town Creek, the average FC density increased to 75 times the upstream value. It is interesting to note that the ratio of TC : FC changes from 12.1:1 above the effluent to 1.1:1 below the sewage discharge. This indicates a highly significant increase in purely fecal organisms, since the method used for FC's detects only 9% of the coliform organisms from non-fecally contaminated soil and detects 96% of the coliforms from warm-blooded animal feces[6].

Several miles downstream from Tompkinsville just before the Barren River flows into the Barren River Reservoir, the TC and FC average densities per 100 ml decreased to 17,000 and 5,900 respectively. This is believed to be due to a combination of two factors: 1) dilution effect and 2) limited bacterial survival in runoff water. The first sample taken in Barren River below the reservoir dam was upstream from Difficult Creek and approximately 1/2 mile downstream from the dam. The average TC, FC, and FS densities per 100 ml were 12,300, 267, and 18 respectively indicating a relatively low level of pollution—the lowest level of any site sampled within the watershed. Further, the high TC :FC ratio (46:1) suggests that normal soil organisms, such as *Aerobacter,* may be largely responsible for the results at this sample site. The lower bacterial counts downstream from the reservoir are probably due, at least in part, to dilution, bacterial death, and settling of the organisms while standing in the reservoir (much in the same way as sewage is sometimes allowed to settle in lagoons before discharge into waterways).

The results on samples taken above (site 11) and below (site 9) the Bowling Green* sewage effluent discharge (Table 1) indicate a highly significant increase in the density of total coliforms (223%), fecal coliforms (525%), and a less significant increase in fecal streptococci (64%).

**The sewage effluent of Bowling Green was observed to have a distinct gray color, much darker than the river proper. It tended to flow with little apparent mixing along the south bank for some distance past sample site 10 (about 100 yards downstream from the sewage effluent discharge) as evidenced by the gray color and the surface scum accumulation along this bank. Therefore, since the determining factor of sample site location was a thorough mixing of the river water and sewage effluent, for comparative purposes the values obtained from site 9 (less than one mile downstream from the Bowling Green sewage effluent and upstream of any known contributing water source disregarding local stormwater runoff) were compared to sample site 11 (upstream from Bowling Green sewage effluent discharge).*

Further, the relatively low TC : FC ratio (6.8:1) tends to confirm that the organisms counted were from fecal origin and not some other source. The total coliform values changed from 302,624 to 675,000 per 100 ml. The latter figure is 135 times the federally recommended limit for non-contact recreation. The increase in fecal coliform density from 18,775/100 ml above to 98,667/100 ml (which represents a TC : FC ratio change from 16:1 to 6.8:1) below the sewage effluent discharge, is strong evidence for fecal contamination.

The paired sample sites above and below the sewage discharges of Auburn, Franklin, Glasgow and Scottsville yielded lower total coliform densities below than above the discharges. The fecal coliform and fecal streptococci densities were also lower downstream from the sewage effluent at Franklin, Glasgow and Scottsville. The reason for these findings is not immediately obvious, but may be due, at least in part, to residual chlorine in the treatment plant effluents as suggested by the high chloride concentration below all sewage effluents of the cities sampled (unpublished data), or to possibly some other bacteriocidal chemical present in the sewage discharge. Since the actual sewage effluent was not sampled, it is also possible the effluent may contain a lower bacterial concentration than the upstream water at these sites, thus diluting the stream's coliforms.

The streams which do not carry sewage effluent do not appear to significantly alter the bacterial content of the river with the exception of Little Difficult Creek. This creek had an average TC, FC, and FS per 100 ml of 925,500, 773,250, and 6,294 respectively, as compared to the corresponding upstream river values of 41,625, 5,005, and 114. Little Difficult Creek has a very small volume of flow compared to the Barren River, but still raised the bacterial concentrations of the river below its efflux. No obvious source of pollution was observed on this agricultural stream. However, the high level of contamination may have reflected local sources of pollution such as farm animal wastes or improper human waste disposal. This stream had consistently lower temperatures than most other streams, thus decreasing the normal bacterial death rate and increasing the bacterial counts. The Barren River below the Little Difficult Creek efflux had TC, FC, and FS densities of 324% (134,850 TC/100 ml), 861% (43,075 FC/100 ml), and 917% (1,045 FS/100 ml) respectively of the corresponding upstream values. The TC : FC ratio decreased from 8.3:1 upstream to 3.1:1 downstream, while the ratio in the creek itself before merging with the river was 1.2:1.

The fecal coliforms and fecal streptococci mean concentrations were found to be higher in samples obtained downstream from sewage effluent discharges than in samples from agricultural streams. On this basis, it is probable that fecal coliform, fecal streptococcus bacterial counts, and TC: FC ratios used as parameters are the best indices of fecal pollution in water, rather than TC measurements alone as is now generally employed.

Summary

The data collected in this study show upon simple analysis that the streams in the Barren River Watershed are grossly polluted according to all the bacteriological parameters measured. Since fecal coliform counts are highly indicative of fecal contamination and none of the FC values were below the recommended maximum, the Barren River and the tributary samples apparently had high levels of fecal pollution.

Acknowledgements

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(References Continued on Page 559)

The Morbidity of the Extended Radical Versus the Standard Radical Mastectomy†

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Lexington, Kentucky

The morbidity of the extended radical mastectomy is no greater than for a standard mastectomy. One-third of the internal mammary nodes contain tumor.

THE SURGICAL treatment of breast cancer has been recently undergoing a re-evaluation[1]. While the radical mastectomy remains the hallmark of surgical treatment for breast cancer in this country, there are those who advocate different modes of surgical therapy for this disease. Crile[2] has criticized the standard radical mastectomy not only because it is mutilating but because it may alter host immune response to tumor. At the other end of the spectrum Urban[3] and Sugarbaker[4] have advocated more vigorous surgical treatment including dissection of the internal mammary nodes for certain breast lesions. They claim increased survival with their procedure, however, both series suffer from a lack of control patients.

Rush and colleagues reported on a small group of 16 patients who underwent radical mastectomy and internal mammary node dissection at the University of Kentucky Medical Center and found no increase in morbidity or mortality with the extended procedure[5]. This report re-evaluates the morbidity of the two procedures in 43 patients with an extended mastectomy versus 80 patients undergoing a standard radical mastectomy.

Patient Selection

One hundred and forty-seven patients were seen at the Medical Center between September 1, 1963 and December 31, 1970, with primary breast cancer. Axillary or chest wall fixation, ulceration of the breast or extensive edema, inflammatory carcinoma or multiple satellite skin nodules precluded operation for cure. Twenty-four patients were included in this category. The remaining 123 patients were treated surgically for cure. Patients with inner quadrant lesions or obviously palpable axillary lymph nodes generally received an extended mastectomy including internal mammary node dissection. The surgical technique used has been previously described[5]. Patients not having an extended radical were treated with a classical mastectomy.

Results

The demographic characteristics of the two groups are strikingly similar although the patients were not randomly assigned to a series. There were 42 females and one male in the extended radical group with an age range of 29 to 71 years and a mean age of 50. Forty-two of the patients had adenocarcinomas. Forty were Caucasian.

The mean age for the 80 women undergoing radical mastectomy was 55 with a range of 36 to 82 years. There were 70 white and nine Negro women. Seventy-nine of the lesions were adenocarcinomas.

The distribution of the lesions is shown in Table I. The tendency toward using the extended radical mastectomy for central or inner quadrant lesions is evident.

Table I

LOCATION OF PRIMARY LESIONS

	Standard	Extended
Outer Quadrant	57 (71.2%)	19 (44.1%)
Central*	12 (15.0%)	10 (23.3%)
Inner Quadrant*	11 (13.7%)	14 (32.5%)

*The extended radical mastectomy has been used more frequently for central and inner quadrant lesions.

The morbidity of the two procedures was determined by comparing several intra-operative and postoperative parameters. Blood loss at operation, blood replacement, fluid replacement, operating time and intra-operative com-

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plications were determined and results are shown in Table II. Accurate determination of blood loss, made by weighing sponges and measuring suction volume, showed a slight but insignificant increase in blood loss with the extended procedure. Fluid replacement was likewise only slightly elevated. Few patients required transfusions but the mean volume replaced was higher in the extended group largely because of an excessive blood loss in one patient. The only statistically significant difference in the two groups was in the lengthening of the operating time ($p<.05$). Postoperative hospital stay was virtually identical.

Table II

COMPARATIVE MORBIDITY FACTORS

	Standard	Extended
Operating Time (Min.)	180	225
Fluid Replacement (cc)	1750	1900
Blood Replacement (cc)	250	625
Estimated Blood Loss (cc)	780	1050
Post-Operative Stay (Days)	9.7	10.5

Postoperative wound complications showed no difference in either series in the percentage of patients with skin slough, incidence of seromas or wound infection. Two patients in each group had a postoperative pneumothorax. Atelectasis occurred more frequently in the extended radical group presumably due to dissection of the chest wall; attention to pulmonary problems in this group therefore has been more vigorous. The incidence of postoperative pneumonitis has been quite low in both groups. There have been no deaths in the extended radical mastectomy group and one death (1.2% mortality) in the standard radical group. This fatality occurred in an elderly, debilitated patient who developed progressive postoperative pneumonia leading to her death on her 28th postoperative day.

Pathology

Of the 37 patients with adequate pathologic examination, 13 had positive internal mammary nodes (35.1%) (FIG. 1). Only one of the 13 patients with positive internal mammary nodes had negative axillary lymph nodes.

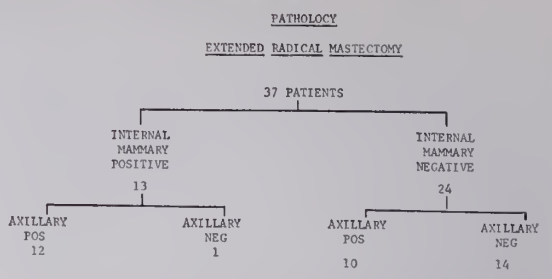


Fig. 1 Only one case had positive internal mammary nodes with negative axillary nodes. More than one-third had both positive for tumor.

Twenty-four patients had internal mammary nodes negative for tumor; 14 had axillary nodes negative and 10 had positive nodes in the axilla. Of the 13 patients with positive internal mammary nodes, five lesions were in the inner quadrant, three were central and five were in the outer quadrants. There were 24 lesions which were central or inner quadrant with eight positive for tumor in the internal mammary chain.

Comment

The critical question regarding the effect of the extended radical mastectomy on prolongation of survival cannot be answered by this study. The mean follow-up period for both groups is similar—3.8 years for the standard radical and 3.6 for the extended radical—but the groups are too small and the follow-up period too short to assess the value of the operation. Survival is slightly better in extended radical group but this difference is not statistically significant (FIG. 2).

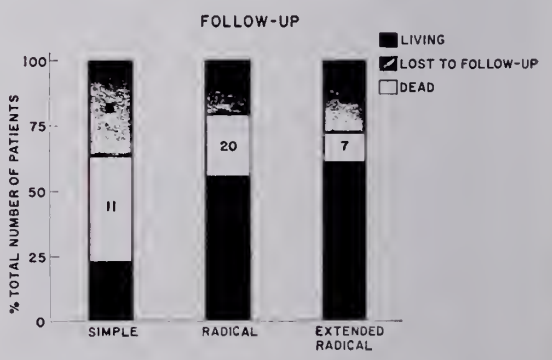


Fig. 2 Survival figures for the two procedures show no difference. Simple mastectomy data shown for comparison.

The rationale for most cancer operations includes removal of the entire potential lymphatic drainage system. Using this concept as a central premise of breast cancer surgery, the standard radical mastectomy often seems inadequate because lymph nodes outside the axilla often harbour tumor cells. Handley[6] biopsied internal mammary nodes during 500 consecutive radical mastectomies and found 31% were involved in the 158 patients with inner quadrant lesions. If the axilla had tumor involvement then outer quadrant lesions had positive internal mammary nodes 51% of the time and inner quadrant lesions 58% of the time. Therefore, in 25% of the operable cases tumor was left behind in the internal mammary chain with a standard radical mastectomy. Urban[3] reported that of 33 patients with central or inner quadrant lesions, 19 had positive internal mammary nodes. In this series, 35.9% had internal node involvement with a much higher yield from central and inner quadrant lesions.

Urban and Sugarbaker both claim increased survival with the extended procedures, but the present report cannot add valid observations for or against this conclusion. However, it does seem obvious that the extended procedure can be accomplished without an increase in operative morbidity or mortality and that a significant number of patients have tumor-bearing internal mammary lymph nodes. Whether extirpation of these nodes improves survival must eventually be answered by long term follow-up of a control series of patients.

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Scientific Themes For Annual Meeting:

"Respiratory Distress"

"Trauma"

"Atherosclerosis"



GRAND ROUNDS



The University of Kentucky Medical Center

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

Polypoid Diseases Of The Gastrointestinal Tract

RENEWED interest in the microscopic characteristics of intestinal polyps has produced a better understanding of their natural history.

Basically there are four major classes of intestinal polyps: neoplastic, hamartomas, inflammatory and hyperplastic (Table I).

A brief review of the microscopic characteristics and cellular kinetics of the various polyps illuminates their distinct biologic behavior.

Normal Intestinal Epithelium — Small Bowel

The cells that comprise the normal small bowel muscosa have a life expectancy of two to three days. The cell closest to the basement membrane divides and the daughter cells migrate toward the lumen to be sloughed and replaced about twice a week. As the daughter cells migrate up the villus they become differentiated into one cell type or another. It is extremely rare for the differentiated cell to divide into two daughter cells. Cell division occurs only in those cells closest to the basement membrane.

Large Bowel — Colon and Rectum

The cell division pattern in the colon and rectum is the same as for that in the small intestine with the exception that the cells live about a day longer, (i.e.) from three to five days.

Intestinal Cancers

The cells that comprise the average bowel intestinal cancer not only live much longer but divide much slower than normal cells. Indeed on *a priori* grounds one could have predicted that the concept of intestinal cancers being composed of wildly growing, rapidly multiplying cells would be in error.

Equally important is the observation that all cells, including the surface cells in a cancer, are capable of multiplying. It is these three features which separate normal epithelium from the cancer; malignant intestinal cells 1) live longer, 2) divide less frequently, 3) can divide even when well differentiated or not in contact with the basement membrane.

With these concepts in mind the differences between the various types of intestinal polyps became more apparent.

TABLE I

Classification of Intestinal Polyps

I. Neoplastic
   - A. Adenomatous polyps
   - B. Villous adenomas

II. Hamartomas
   - A. Juvenile Polyps
   - B. Peutz-Jeghers Polyps

III. Inflammatory (Pseudopolyps)
   - A. Polyps seen in regional enteritis and/or ulcerative colitis.

IV. Hyperplastic Polyps
   - A. Hyperplastic (metaplastic polyps)

Hyperplastic or (Metaplastic) Polyp

The fundamental observations of Lane et al[2], and Morson[3], in the past several years have made it abundantly apparent that the hyperplastic polyp is the most common type of intestinal polyp. Lane et al have recently written an erudite and scholarly discussion of hyperplastic polyps and listed the major differences between them and adenomatous

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polyps. These features are summarized as follows:

1) Hyperplastic polyps are the most common types of intestinal polyps.

2) Between 85 and 90% of all polyps less than 5 mm in size are hyperplastic polyps.

3) The hyperplastic polyp represents a focal area of differentiated glandular hyperplasia.

4) Cellular kinetics of hyperplastic polyps are similar to that seen in normal large bowel mucosa (i.e.) mitotic activity is limited to the cells adjacent to the basement membrane. Since there is no cell division away from the basement membrane, these polyps can not reach a large size.

5) Hyperplastic polyps are not premalignant and do not become adenomatous polyps.

6) Hyperplastic polyps probably appear and regress frequently.

Recent data shows that adenomatous polyps have the same type of cellular kinetics as intestinal cancers, (i.e.) any of the cells in an adenomatous polyp can divide and multiply. There is significant mitotic activity at the surface of most adenomatous polyps. This latter characteristic permits a few adenomatous polyps to reach 3 to 5 cm in size. The following features are characteristc of adenomatous polyps:

1) Adenomatous polyps double in size only over a long period of time. Some take as long as three to five years to increase from 1 cm to 2 cm in size.

2) Less than 10% of adenomatous polyps will ever reach 2 cm in size.

3) The chance of invasive carcinoma develops in an adenomatous polyp in less than 5% if the polyp is less than 2 cm in size.

4) Isolated adenomatous polyps are essentially unknown in children and teenagers, and are distinctly uncommon under the age of 30.

The recognition and confirmation of the distinct and fundamental difference between hyperplastic and adenomatous polyps represents a major advance in intestinal pathology.

Villous Adenomas

Villous adenomas differ from adenomatous polyps both by light and electron microscopy. The structural framework of the typical villous adenoma consists of a series of finger-like projections while the individual cells are usually mucus secreting. Nevertheless, the cellular kinetics of villous adenomas show they have much in common with adenomatous polyps and cancer, (i.e.), cells at the periphery of the tumor have the ability to divide.

Hamartomas

A hamartoma can be thought of as a group of normal cells in an abnormal location. Both the Peutz-Jeghers polyp and the juvenile polyp are considered to be hamartomas, and not to be premalignant.

Clinical Characteristics

Adenomatous Polyps

Since it has long been assumed that the common garden variety of large bowel polyps was the adenomatous polyp, there has been great controversy as to its premalignant potential or lack thereof. It is simply sufficient to say that such agruments are rendered meaningless now that it can be clearly shown that the overwhelming majority of polyps previously called adenomatous are in reality hyperplastic (metaplastic) and have no clinical significance. Only a small minority of individuals with colon polyps will prove to have true adenomatous polyps. It is imperative that an accurate distinction be made between these two type polyps as only those few individuals with adenomatous polyps need close surveillance.

The majority of colon polyps less than 1 cm in size will prove to be hyperplastic polyps not adenomatous. And even in adenomatous polyps less than 1 cm in size, the chance in invasion is less than 1 to 2%. Since only 10% of adenomatous polyps reach 2 cm in size and since the likelihood of invasion being noted in an adenomatous polyp less than this size is quite small (less than 5%), it seems reasonable to follow 1 cm colon polyps by repeat barium enema studies and to recommend excisional therapy for those over 2 cm in size. Any polyps within the reach of the sigmoidoscope should be biopsied, of course.

The advantages of the newer fiberoptic colonoscopes are such that laparotomy for

biopsy of polyps in the sigmoid and left colon will rarely be done in the future.

Villous Adenomas

Mucoid diarrhea is often a presenting complaint in patients with villous adenomas. These lesions are so soft on palpation and so similar to normal appearing mucosa on sigmoidoscopy, that they may easily be missed on initial examination. Persistent symptoms mandate a persistent physician.

Small villous adenomas can usually be treated by local excision. Large, circumferential lesions in the rectum present a challenging problem. Intelligent treatment requires a concerned surgeon, a knowledgeable pathologist and a cooperative patient. Abdominal perineal resection may be necessary in some patients despite repeated negative biopsies.

Juvenile Polyps

Juvenile polyps were so named because they were initially recognized in children. The name appears to be a misnomer as these polyps have been found in patients in their 70's. It is more appropriate now to think of juvenile polyps as hamartomas of a juvenile type of connective tissue.

There is striking correlation between the microscopic appearance and the clinical behavior of juvenile polyps, (i.e.), juvenile polyps are covered by a single layer of columnar cells and consists of large mucus filled glands. The covering epithelium frequently ulcerates.

Patients with juvenile polyps usually present with either rectal bleeding with or without a mucoid discharge.

Most juvenile polyps are in the rectum and can be easily removed via a sigmoidoscope. In children with a juvenile polyp or two in the colon, watch-waiting is recommened. The majority of juvenile polyps eventually slough. Sloughing is usually signaled by brisk rectal bleeding. Adenomatous polyps rarely, if ever, occur in children.

Hereditary Polypoid Syndromes

The adenomatous, juvenile and Peutz-Jeghers polyps may have an hereditary basis in a given family.

Familial Polyposis of the Colon

This disease is characterized by the presence of numerous or innumerable adenomatous polyps in the colon and rectum developing in the second to fifth decade and resulting in the development of colon cancer in virtually 100% of untreated patients. The disease is transmitted as a non sex-linked dominant.

Diagnosis: A careful family history in the young individual with adenomatous polyps, and in every individual with colorectal cancer will make the diagnosis in many patients. Sigmoidoscopy and barium enema studies are often diagnostic.

Treatment: Either abdominal colectomy with end to end ileoproctostomy or proctocolectomy with ileostomy is mandatory. Youngsters with familial polyps should be operated on before age 18.

Peutz-Jeghers Syndrome

Peutz-Jeghers syndrome is characterized by presence of circumoral and buccal melanin pigmentation and intestinal polyps.

The pigmentation resembles freckles, but are located where freckles rarely occur, (i.e.), lips, tongue, and buccal mucosa. These pigmented spots are often noticed in children and tend to blanch with age.

The intestinal polyps may be located in the stomach, duodenum, small or large bowel. The common presenting complaint is either addominal pain, with or without intestinal obstruction and anemia due to chronic blood loss. The polyps are frequently pedunculated and act as the leading point of intestinal obstruction or intussusception.

Peutz-Jeghers polyps are benign despite the worrisome appearance of intestinal epithelium surrounded by muscularis mucosa. Despite the benignity of the Peutz-Jeghers polyps, it appears that such patients are at an increased risk to develop a gastrointestinal cancer. There does not seem to be any correlation between the frequency distribution of these polyps and subsequent cancers.

Females with Peutz-Jeghers syndrome have an increased risk of developing ovarian neoplasms. Some of the ovarian tumors are hormonally active and malignant. Frequently these ovarian neoplasms are only a centimeter or two in size.

Peutz-Jeghers syndrome is transmitted as an incomplete dominant. It is not sex-linked.

Diagnosis is dependent on clinical recognition of the characteristic melanin pigmentation and radiographic demonstration of gastrointestinal polyps.

Treatment is directed at the cause of symptoms, (i.e.), the presence of gastrointestinal polyps. Since the polyps are benign and tend to recur, it is advisable to resect as little intestine as possible. Polypectomy or segmental intestinal resection are the operative procedures of choice.

Prognosis of patients with Peutz-Jeghers syndrome is surprisingly good. Many patients have gone two to three decades without symptoms despite the presence of scattered polyps.

Juvenile Polyps

Although the overwhelming majority of juvenile polyps occur as isolated lesions in the colon and rectum of children, it is now apparent that a few families have a hereditary form of juvenile polyposis.

It is convenient to classify Juvenile Polyposis into three types:

1. Juvenile Polyposis of Infancy
2. Generalized Juvenile Gastrointestinal Polyposis
3. Juvenile Polyposis Coli

Recognition of the last syndrome, juvenile polyposis coli, is most important: 1) The dis-

TABLE II

Hereditary Polypoid Diseases of the Gastrointestinal Tract

SYNDROME	TYPES OF POLYP	DISTRIBUTION OF POLYPS	EXTRAINTESTINAL MANIFESTATIONS	NATURAL HISTORY
Familial Polyposis Coli	Adenomatous	Colorectum — 95% Duodenum — 2-4%	Osteomas, Osseous and dental abnormalities	Numerous adenomatous polyps develop in colon and rectum in 2nd thru 5th decade
			Fibrous tissue tumors (desmoids)	Diarrhea, rectal bleeding common
			Epidermoid cysts, Lipomas	Virtual 100% development of colorectal cancer
Peutz-Jeghers Syndrome	Hamartoma of smooth muscle	Stomach, small and large intestine	Characteristic oral, circumoral, linqual and buccal pigmentation	Polypoid lesions in small bowel lead to bleeding, intestinal obstruction & intussusception in 1st-7th decades. 1-3% of lesions are malignant
				5% of females develop ovarian tumors
				Reasonably good long-term prognosis
Juvenile Polyposis of infancy	Hamartomas of connective tissue	Stomach, small and large bowel	Retarded motor development	Rectal bleeding, diarrhea, anemia, inanition, intussusception and intestinal obstruction in 1st and 2nd year of life
				All male infants to date
				Poor Prognosis
Juvenile Polyposis Coli	Hamartomas of connective tissue	Colorectum	High incidence of congenital abnormalities	Rectal bleeding, diarrhea, 1st and 2nd decade
				Frequent spontaneous sloughing of polyps
				Low incidence of cancer — Prognosis good
Generalized Juvenile Polyposis	Hamartomas of connective tissue	Stomach, small and large bowel	None noted	Gastrointestinal bleeding in 1st-4th decades
				Bleeding recurrent and persistent leading to numerous gastrointestinal operations
				Low incidence of malignancy

tribution of these juvenile polyps is the same as the adenomatous polyps in familial polyposis of the colon; and 2) Treatment of patients with juvenile polyposis coli can be very conservative in that this is a benign disease. Even when intestinal resection is necessary, it is always possible to preserve the rectum and rectosigmoid colon.

Juvenile polyposis of infancy is a rare condition in which young infants develop extensive juvenile polyps in the stomach and small and large bowel. These polyps tend to increase in size and number during the first year of life. Death usually results from chronic bleeding, intussusception and inanition.

Generalized gastrointestinal juvenile polyposis is manifested by the presence of juvenile polyps in the stomach and large and small bowel. The gastric polyps lead to recurrent bouts of upper gastrointestinal bleeding. Total gastrectomy has been required in several patients.

A summary of the various types of hereditary polypoid diseases is shown in Table II.

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Charles R. Sachatello, M.D.
Associate Professor of Surgery

WATCH FOR
THE AUGUST JOURNAL

Complete Annual Meeting Details

1972 KMA Annual Meeting

September 19-21

Stouffer's Inn and Convention Center

SCIENTIFIC PROGRAM HIGHLIGHTS

. . . Distinguished Guest Speakers

. . . Sixteen Specialty Group Meetings

. . . Outstanding Scientific Exhibits

SPECIAL FEATURES

. . . President's Luncheon

. . . Presentation of Top KMA Awards

. . . KEMPAC Seminar

. . . Two Sessions of the House of Delegates

. . . Orientation Program for New Members

. . . Technical Exhibits

. . . U. of L. Class Reunions

. . . Miscellaneous Meetings

SPECIAL ARTICLES

Ephraim McDowell—The Backwoods Surgeon†

FRANCIS M. MASSIE, M.D.*

AS we review the records and interpret the life of Doctor Ephraim McDowell, we are once more impressed with the truism that the combination of the man and the right opportunity is inevitably the cause of any extraordinary result. Often the man creates the opportunity, as many have done who have contributed most to our world. Certainly this applies to Doctor McDowell.

What did Doctor McDowell do to deserve:

. . . . A statute in the Hall of Fame, a national institution which memoralizes famed Americans?

. . . A restored home in Danville, Kentucky, which is honored as a national shrine?

. . . . World-wide recognition as a benefactor of the human race?

. . . The title, "Father of Abdominal Surgery?"

He opened a woman's abdomen and removed an ovary!

But this had been done before, in 1975. Fourteen years before McDowell's now historically famous operation, a Doctor Bennett in Staunton, Virginia, delivered his own wife by Cesarean section after a long and futile labor. After he did this he removed both normal ovaries saying: "This shall not happen again."

Why then did Bennett's operation fail to be nationally recognized? Undoubtedly it was incidental to the main procedure and was never recorded in medical literature (an error of omission never seen today) or private notes. Doctor McDowell's operation was recorded in his own notes and some years later in the literature.

The careful research of Doctor Samuel D. Gross of Philadelphia, while a professor in the Louisville School of Medicine (later at Jefferson), was the real reason for the acceptance of Doctor McDowell's work.

Doctor Gross reviewed the record of every reported case in which an ovary was operated upon. He found that there were ovarian or tube-ovarian abscesses, ovarian cysts pelvic abscesses; but in no case was the ovary removed.

Ephraim McDowell was born in 1771 in Rockbridge County near the present city of Lexington, Virginia, the ninth child of Judge Samuel McDowell. In 1783 Judge McDowell moved with his family to Danville, in that far western province of Virginia, in the employ of the State of Virginia, to settle some land disputes. Characteristically, he chose Danville which was the leading educational community in the province.

Young Ephraim was educated in the local school and to a large extent by his parents. He grew up in a wild country where he learned to hunt, to be alert for Indians, and to love and care for animals. He had often seen animals spayed and, as he said later, thought it would be done in humans if necessary.

His early interest in things medical led him to persuade his father to let him study medicine with Doctor Alexander Humphreys of Staunton. A good medical education in those days was made up of one or more years in a medical school, if possible; then a medical preceptorship under a good practitioner. Such a man was Doctor Humphreys, who urged him to go to the University of Edinburgh in 1793.

Here he had many valuable teachers and many fellow students who later were famous; notably, Samuel Brown, later of Transylvania's first medical faculty, and David Hosack. The greatest influence on his medical career was John Bell, whose teaching clinics were famous, though he was not then at the University of Edinburgh Medical School.

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†*Reprinted with permission from the Bulletin of the American College of Surgeons, January, 1972*

**Emeritus clinical professor of surgery, University of Kentucky College of Medicine, Lexington.*

Doctor McDowell returned in 1795 to enter the practice of medicine in Danville. He was immediately successful not only because his education and training were the best available at that time, but also because of his sound judgement and character.

He had no degree. But this is not surprising because it was not really necessary at that time. In fact, in the recently demobilized Continental Army only 10% of the "doctors" had an M.D. degree. It was not until 1826 that the University of Maryland gave Doctor McDowell an honorary M.D.

It was his custom to perform surgery anywhere, but he preferred to operate in a room in his own home on Sundays. His surgery included the usual amputations and wounds, but also an unusually large number of bladder stones. His cystomy was in males by the perineal approach, in females by the suprapubic extraperitoneal route.

In December, 1809, he was called to see a Mrs. Crawford, in a small town 63 miles from Danville, who proved to have a large and growing abdominal tumor and pain. Her doctors thought she was pregnant and unable to have the baby. Mrs. Crawford was about 45 years old at the time. Doctor McDowell made a careful examination and concluded she was not pregnant but had a large ovarian cyst.

He then made the decision which changed the course of surgical history. He decided the tumor was operable and that he should try to remove it, and this he did in the face of the best surgical judgement in Europe and America. All of the authorities said that to open the abdomen meant death to the patient due to the inevitable infection and resultant peritonitis.

Of course infection followed any abdominal intraperitoneal wound. The hospitals of Europe were rightly known as "pest houses." And no wonder. The surgeons were proud of their long sleeved operating coats which were kept on pegs in the operating room. The sleeves were covered and soaked with blood and pus from previous patients. The more blood and pus the better (they were never cleaned), because it showed the more experience of the surgeon!

So Doctor McDowell, having made his decision, sat down beside his patient and explained what he was sure she had and what he offered as the only alternative to a long and painful illness ending in death. He told her it had never been done before but he believed the tumor could be removed.

Think of the courage of the woman who in those circumstances could say: "Doctor, I am in your hands."

He asked that she come to his home in Danville for the operation. This she did on horseback on a three day trip, resting her protruding lower abdomen on the pommel of the saddle.

When she arrived at the McDowell home in Danville probably on December 22, he put her to bed. On Christmas Day he operated on her. In 1809 Christmas came on Monday. Why didn't he do this surgery on Sunday (the 24th), his usual operating day? Possibly he had noticed a large bruise (hematoma) in the lower left abdominal wall where the tumor had been resting on the pommel of the saddle for the 60-mile trap to Danville. Doctor McDowell was too experienced a surgeon to cut through bruised tissue if it were possible to avoid it. When it looked safe after another day's rest he proceeded. The "bruise" he mentioned in his report, but the reason for waiting another day is pure conjecture.

It is interesting that his nephew, James McDowell, who had for several years been associated with Doctor Ephraim in practice, protested violently against the decision to operate, but when he saw that his iron-willed uncle was determined, James assisted in the operation.

The incision was made nine inches long in the left lower abdomen, extending above the level of the umbilicus. When it was obvious the tumor, though freely movable, was too large to get through the opening, he withdrew 15 pounds of fluid by cutting into the cyst. The ovary was then easy to remove with a long linen suture around its narrow pedicle. It weighed seven and one-half pounds. The ends of this suture were then brought out through the lower end of the closed incision, a drainage "safety valve" in case of infection. (There was none.)

Doctor McDowell then stated that: "When I saw her five days later, she was up and making her bed."

There was no anesthetic! All Mrs. Crawford had was her faith in God and in Doctor McDowell, reinforced by a glass of "cherry bounce," a liquor. She lived 30 more years.

Doctor McDowell was not a writer. After seven years his friends and assistants persuaded him to send a report to his former teacher, John Bell in Edinburgh. Unfortunately, Doctor Bell was in Italy at the time and the report was never brought to his attention by his assistant. One suspects why, but wonders.

The effect on all the medical world was shocked total unbelief, with expressions ranging from mild to insulting, when his report was published in the Eclectic Review in Philadelphia in 1816.

By 1830 he published reports of 12 more ovariectomies with only four deaths.

The world reluctantly admitted that a backwoods man had beaten scientific mankind to a stupendous achievement.

It was as if today the first successful whole brain transplant was claimed by an itinerant pill peddler.

It is characteristic of Ephraim McDowell that he went to Nashville to operate on the wife of a prominent man. (General Andrew Jackson held the patient's hand during the operation.) He sent the husband a bill of $500, the 1820 equivalent of several thousand dollars today. When he received promptly a check for $1500 he immediately sent it back saying it was a mistake. The grateful husband returned the $1500 check and said his wife was well and the amount was correct.

One summer day in June, 1830, he ate, as he thought, too much fruit and in a few hours had severe abdominal pains and distention. A colleague diagnosed it as "inflammation" of the stomach, a diagnosis which covered anything and everything from diaphragm to symphisis. In a few days Ephraim McDowell died, quite possibly from acute appendicitis.

1972 KMA Annual Meeting

To Honor

Hawkins Brown, M. D.

KMA President, 1892



Kentucky Educational Medical Political Action Committee*

During its 10 years of fruitful activity most of the members of KMA and their wives have learned what KEMPAC is and what its objective is—better government. Membership and interest have grown—the present roll is 1,206 members, the largest to date. This is a critical election year, however, and there is an urgent need for us to increase our interest, our contributions and our individual effort if we are to participate meaningfully in directing future legislation.

Many people, including physicians, question the propriety or the necessity of any organized political action in the medical profession. We do not question their sincerity but there appear to be two compelling reasons why such effort is appropriate and necessary. We, as citizens, must be interested in good legislation for the national welfare; as physicians we must be concerned with any laws primarily affecting the health of our people. As members of our profession we have a right and an obligation to help direct the future trend into directions least destructive to our own interests and way of life.

For the past 10 years the legislative committees of many of the component county societies of KMA have sought to screen candidates for office in our various districts in an effort to determine which ones, irrespective of party affiliation, show promise of becoming the best legislators and have sought to support them, politically and financially. Our score of success has been remarkably good, though of course not always successful. The same effort has been carried on by many other state medical societies and nationally. Many of us feel that this is the most practical and effective way by which we can work for better government.

The money necessary to carry out the program has been made available through membership in KEMPAC. Formerly the cost was $20.00 per year. It is now $35.00 a year, a favorable indication that more physicians and their families accept this as a reasonable and effective means of participation in better government. All of the money contributed is used for the intended purpose. There is no percentage deducted for overhead expenses.

Whether we prefer to make our political activity and financial support an individual effort or combine with others is to be our own decision. It would appear however, that united effort will be more effective. In any case it is prudent that we, as physicians, participate in helping to shape the legislative direction of the future.

SAM A. OVERSTREET, M.D.

A copy of our report, filed with the appropriate supervisory officer is (or will be) available for purchase from the Superintendent of Documents, United States Government Printing Office, Washington, D.C. 20402.

Letters To The Editor

The Letters To The Editor column is a means for the KMA physicians to express their opinions and viewpoints on varied topics. If you have an item you would like brought before your fellow practitioners, please submit it to Letters To The Editor, Kentucky Medical Association, 3532 Ephraim McDowell Dr., Louisville, Kentucky 40205. Communications should not exceed 250 words. The right to abstract or edit is reserved by the editors of *The Journal*. Names will be withheld upon request, but anonymous letters will not be accepted.

Dear Editor:

I have noted the progress the Kentucky Medical Association is making in peer review and feel that it is a vital function. However, I have long felt that the KMA has cow-towed to the Blue Cross Hospital Plan too long for our well-being.

Why there would be a different fee for the same service, rendered in different parts of the State of Kentucky, is beyond me. I can see no good reason to let the Physician's Mutual more or less set our fees so they can sell more medical insurance. Or at least, that was the reason offered when the Blue Cross representative came to our Medical Association in Owensboro, to ask us to follow the reasonable and customary fee plan.

The President of the National Blue Cross and Blue Shield Organization stated about six months ago, on television, that they controlled five-sevenths of all the major-medical groups in the United States and could influence the rest. So the action where the Blue Cross of greater Philadelphia refused to pay and the physician did pay for a so-called unnecessary admission.

Clifton E. Lowry, M.D.
Owensboro, Kentucky

EDITORS' NOTE: The following response to Doctor Lowry's letter is being made by Henry B. Asman, M.D., Associate Editor of The Journal of the Kentucky Medical Association.

Dear Doctor Lowry:

We, too, are proud of our progress in Peer Review. We feel that we are head and shoulders above many states and we will become even more effective through our newly established Foundation for Medical Care.

We should point out, however, that neither KMA, our Peer Review system, nor the Foundation is cow-towed to Kentucky Blue Cross and Blue Shield. As pre-payment organizations, they have a right to use our Peer Review system and *all decisions are made by physicians*. Both Blue Cross and Blue Shield have made a strong commitment to abide by the decisions of Peer Review and they have assured us that they have not and will not set the fee of any doctor.

Both AMA and KMA strongly endorse the Usual, Customary, and Reasonable concept. By definition, this concept recognizes that physicians set their own fees and that there are different charging patterns among physicians based on their location, specialty, and any unusual circumstances involved.

With regard to the case involving Blue Cross of Greater Philadelphia, we understand that the rejection was based on a recommendation made by three physicians at Blue Cross and six physicians from the County Medical Society. These physicians, after reviewing the medical record information, stated that the admission to the hospital was not necessary since the services could have been done as an out-patient. It is our understanding that the Judge's decision that the physician was liable for the hospital bill has been appealed to a higher court.

Kentucky Blue Cross and Blue Shield have placed much confidence in Kentucky medicine. With all of the adverse publicity we are getting today, we need more friends like the Blues.

Henry B. Asman, M.D.
Associate Editor

Dear Editor:

I would like to submit an errata for the July issue of The Journal of the Kentucky Medical Association concerning the article, "Forensic Aspects of Transfusion Reactions," published in the May, 1972 issue on page 382.

The titles of the authors Nalbandian and Conte were inadvertently reversed. The footnote should read as follows:

(Nalbandian) Associate Pathologist, Blodgett Memorial Hospital, Grand Rapids, Michigan.

(Conte) Commanding Officer, Director, U. S. Army Medical Research Laboratory, Fort Knox, Kentucky.

Thank you.

Frank R. Camp, Jr., LTC, MSC
Fort Knox, Kentucky

ORGANIZATION SECTION

Scientific Program of 1972 KMA Annual Meeting, Held Sept. 19-21 To Feature Outstanding Kentucky and Out-of-State Physicians

Well-known authorities from across the nation will participate with Kentucky physicians to present an outstanding scientific program during the KMA Annual Meeting, September 19-21. Informative presentations and panel discussions will highlight the four general sessions and specialty group meetings for the 1972 meeting. All scientific sessions will be held at the Louisville Convention Center.

Themes chosen for this year's general sessions include "Respiratory Distress," "Trauma," and "Atherosclerosis." Dealing with the latter theme on the Thursday morning program will be Oglesby Paul, M.D., Chicago, Ill. and Edgar A. Haunz, M.D., Grand Forks, N. Dak. E. R. Woodward, M.D., Gainesville, Fla. will also appear on the Thursday, September 21, scientific program. Speaking during the opening session on Tuesday, September 19, will be Thomas K. Oliver, M.D., Pittsburgh, Pa.



Doctor Paul



Doctor Haunz

In addition to the scientific program, the 1972 meeting will include two sessions of the KMA House of Delegates and the annual President's Luncheon. Both of these features will take place at Stouffer's Louisville Inn.

Other highlights of the three-day session will be the annual convention of the Woman's Auxiliary to KMA, an Orientation Program for new members of the Association, ten five-year reunions of the University of Louisville School of Medicine, the annual KEMPAC Seminar, and many technical and scientific exhibits. A number of miscellaneous meetings will be announced at a later date in the Annual Meeting Program Booklet.

A guest of the Kentucky Chapter, American College of Physicians, Doctor Paul is Professor of Medicine at Northwestern University College of Medicine. A 1942 graduate of Harvard Medical School, Doctor Paul is associate editor of *Diseases of the Chest* and is a member of the editorial board of *Circulation*. He is on the Board of Directors of the International Cardiology Foundation and the United States—United Kingdom Board on Cardiorespiratory Diseases. Doctor Paul's topic for the Thursday morning session is "Factors in Coronary Mortality."



Doctor Woodward



Doctor Oliver

Immediately following Doctor Paul on the program will be Doctor Haunz's presentation entitled "Diabetes Mellitus: Newer Concepts in Diagnosis and Treatment." Doctor Haunz is Professor and Chairman of the Department of Medicine at the University of North Dakota School of Medicine. A 1943 University of New York School of Medicine graduate, Doctor Haunz is the past chairman of the Board of Governors, American Diabetes Association. He is the author of the Section on Diabetes Mellitus in "1972 Current Therapy."

Doctor Woodward, who will speak on "The Story of William Beaumont" at the Thursday morning session, is a 1942 graduate of the University of Chicago School of Medicine. He is now Professor and Chairman of the Department of Surgery at the University of Florida. A 1970 recipient of the Arthur H. Shipley Award of the Southern Surgical Association, Doctor Woodward is on the editorial boards of several journals and is the editor of the *American Lectures in Gastroenterology*.

Professor and Chairman of the University of Pittsburgh's Department of Pediatrics, Doctor Oliver is a 1949 graduate of Harvard Medical School. He is an official examiner of the American Board of Pediatrics and is on the editorial board of *Pediatrics*. Speaking on the Tuesday morning session on "Current Therapy of Hyaline Membrane Disease," Doctor Oliver is the medical director of Children's Hospital of Pittsburgh.

1972 Scientific Program Outline Released for Annual Meeting

The following preliminary scientific program for the 1972 KMA Annual Meeting has been released by John S. Harter, M.D., Louisville, KMA President. The program will be presented at Louisville's Convention Center.

Each half-day session of the three-day program will feature a 30-minute intermission in order that physicians may visit the scientific and technical exhibits.

TUESDAY, SEPTEMBER 19

Morning Session

THEME: "Respiratory Distress"

Opening Ceremonies

"The Diagnosis of Fetal Distress" — Edward H. Hon, Md., Los Angeles, Calif.

"Current Therapy of Hyaline Membrane Disease" — Thomas K. Oliver, M.D., Pittsburgh, Pa.

"Radiologic Evaluation of Respiratory Distress in the Neonate" — Edward B. Singleton, M.D., Houston, Tex.

THEME: "Trauma"

"The Trauma Patient and the Anesthesiologist" — Adolph H. Giesecke, Jr., M.D., Dallas, Tex.

"Booby Traps in Orthopaedics" — Charles A. Rockwood, Jr., M.D., San Antonio, Tex.

"A Simplified Approach to the Management of the Burned Child" — Duane Larson, M.D., Galveston, Tex.

Afternoon Session

Eight of the 17 participating specialty groups will meet simultaneously at 2 p.m. No general scientific session will be held at that time.

WEDNESDAY, SEPTEMBER 20

Morning Session

"Simple Guides to the Diagnosis and Management of Blood Fat Disorders" — Robert I. Levy, M.D., Bethesda, Md.

"Do's and Don'ts of Crohn's Disease" — Rupert B. Turnbull, Jr., M.D., Cleveland, Ohio

"Surgical Treatment of Complications of Myocardial Infarction" — Gordon K. Danielson, M.D., Rochester, Minn.

"Diabetes; Is Glycemic Control Necessary?" — George C. Kyle, M.D., Philadelphia, Pa.

"Hyperlipidemia and Premature Coronary Disease, Past, Present, and Prospects" — Robert I. Levy, M.D., Bethesda, Md.

Afternoon Session

"Diabetes and Pregnancy" — George C. Kyle, M.D., Philadelphia, Pa.

"The Mouth and Systemic Disease" — Robert R. Finch, D.D.S., Louisville, Ky.

"Treatment of Complicated Diverticulitis" — Rupert B. Turnbull, Jr., M.D., Cleveland, Ohio

THURSDAY, SEPTEMBER 21

Morning Session

"Story of William Beaumont — The Discovery of Gastric Digestion" — E. R. Woodward, M.D., Gainesville, Fla.

"Para-Psychology, Its Implications for Medicine" — Montague Ullman, M.D., Brooklyn, N.Y.

THEME: "Atherosclerosis"

"The Role of Plasma Lipoproteins in the Pathogenesis of Atherosclerosis — Harvey F. Watts, M.D., Philadelphia, Pa.

"Factors in Coronary Mortality" — Oglesby Paul, M.D., Chicago, Ill.

"Diabetes Mellitus: Newer Concepts in Diagnosis and Treatment" — Edgar A. Haunz, M.D., Grand Forks, N. Dak.

"Cutaneous Xanthomatoses" — Robert R. Kierland, M.D., Rochester, Minn.

Afternoon Session

The remaining nine specialty groups will meet at 2 p.m., with the exception of the Kentucky EEN&T Society which will begin their meeting at 9 a.m. No general session is scheduled for the afternoon.

Speaker At President's Luncheon To Be Entertainer Mark Russell

The featured speaker for this year's President's Luncheon will be entertainer Mark Russell from Washington, D.C. To be held at 11:50 a.m. on Wednesday, September 20, the Luncheon will take place in the Grand Ballroom of Stouffer's Louisville Inn, according to KMA President, John S. Harter, M.D., Louisville.



Mr. Russell

Russell's topic for the Luncheon address is "Politics Is A Laughing Matter."

Resident comedian at the Washington Shoreham Hotel since 1961, Russell is a political satirist and has appeared on several television shows. An author, as well as a singer and pianist, Russell now has two record albums entitled, "Which Way Is The Revolution or The Face On The Senate Floor" and "Up the Potomac Without A Canoe."

According to the New York *Daily News*, "Mark Russell is the Capital's own funny man. His comment on the local scene is as much a part of Washington as the Congressional Record."

Doctor Harter urges all members and their wives to attend the President's Luncheon and hear this interesting and entertaining speaker.

1972 Emergency Care Seminar Attended by 120 Nurses

Over 120 nurses from across the state attended the Second Annual Nurses Seminar on Emergency Health Care held May 11-12 in Louisville.

The two-day event was sponsored by KMA, the Jefferson County Medical Society, the Kentucky Committee on Trauma of the American College of Surgeons and the University of Louisville School of Medicine.

Physicians from the U of L faculty gave lectures and demonstrations for the nurses, who were primarily from emergency rooms, intensive and coronary care units, operating and recovery rooms, and from industries.



In the photo above, Donald M. Thomas, M.D., Director of Emergency Services, Louisville General Hospital, is giving a demonstration on cardiopulmonary resuscitation during one of the Thursday afternoon demonstration groups.

H.B. 427 On Generic Drugs Became Law June 16

On June 16, 1972, the legislation passed by the recent Kentucky General Assembly regarding generic drugs became effective. House Bill 427, which passed both Houses with very few dissenting votes, establishes a Kentucky Drug Formulary Council consisting of nine members. Five members of that Council are appointed by the Governor, two of whom are to be physicians selected from nominations made by the Kentucky Medical Association. The other three members are to be a pharmacist, selected from nominations made by the Kentucky Pharmaceutical Association; a consumer "who is in no manner connected with any business or agency in the field of delivery of health services"; and a member to be appointed at the discretion of the Governor.

This Formulary Council is charged with the responsibility of preparing a formulary of drugs and pharmaceuticals together with their generic or chemical names that are determined by the Council to be therapeutically equivalent to specified brand name drugs and pharmaceuticals. The decision will be made based on substantial scientific evidence which shall be made available to the Formulary Council.

The law will have a direct effect on all practicing physicians in Kentucky in at least one very important area. It states, "If, in the opinion of a practitioner, it is to the best interest of his patient that an equivalent drug should not be dispensed, he may indicate in the manner of his choice on the prescription 'Do Not Substitute' except that the indication shall not be preprinted on a prescription." In this manner, the practicing physician will still make the final determination as to the type of drug his patient receives. It will be imperative that the words "Do Not Substitute" be shown on any prescription which the physician feels should not be changed in any manner.

It is expected to be some months before the proposed Formulary Council will be in a position to authoritatively furnish a proper list of generic drugs. If you wish a copy of this legislation, contact the KMA Headquarters Office.

KEMPAC Celebrates 10th Year At Annual Political Seminar

Fred C. Rainey, M.D., Elizabethtown, KEMPAC Board Chairman, has announced the Tenth Year Anniversary Celebration of KEMPAC will be held at Stouffer's Louisville Inn on September 18, starting with a reception at 6 p.m. EDT, followed by dinner and the program.

Walter "Dee" Huddleston, Democratic candidate for U.S. Senator from Kentucky, and Louie B. Nunn, Republican senatorial candidate, have been invited to address the Tenth Annual Political Seminar which precedes the KMA Annual Meeting.

Doctor Rainey announces an all-time high membership in KEMPAC this year and urges all of you to attend and help celebrate this gala affair.

The program will be published in the August issue of *The Journal.*

KMA Board Reaffirms Support of CHP

The KMA Board of Trustees, at their April 12 meeting, reaffirmed its support and endorsement of Comprehensive Health Planning and urged physicians to continue their active participation on the state and regional health planning councils.

Appreciation was expressed by the Board to those physicians serving on these councils for their service to the citizens of Kentucky and to the medical profession.

U of L School Head Resigns

Douglas M. Haynes, M.D., resigned last month as Dean of the University of Louisville School of Medicine. He said he hopes his resignation will be effective by November 1.

Doctor Haynes, a member of the faculty at U of L since 1955, was named as interim Dean in May, 1969 and permanent Dean in April, 1970.


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Femininity & Vaginitis



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ıche is a cure-all for vaginal
retions and malodor. Mother
s daughter and the myth is
petuated.
Other cosmetic products are not
ch better. Though they may be
ective in some minor infections,
y cannot touch the real medical
blem, which very often is
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Indications: For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture. The oral form is indicated also for intestinal amebiasis and amebic liver abscess.

Contraindications: Evidence or history of blood dyscrasia, active organic disease of the CNS, the first trimester of pregnancy and a history of hypersensitivity to metronidazole.

Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to those pregnant patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. Exacerbation of moniliasis may occur. In amebic liver abscess, aspirate pus during metronidazole therapy.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, constipation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified. Flattening of the T wave may be seen in EKG tracings.

Dosage and Administration

For Trichomoniasis. In the Female: One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during, and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used,* one 500-mg. insert is placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. *In the Male:* Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

For Amebiasis. Adults: For acute intestinal amebiasis, 750 mg. orally three times daily for 5 to 10 days. For amebic liver abscess, 500 to 750 mg. orally three times daily for 5 to 10 days.

Children: 35 to 50 mg./kg. of body weight/24 hours, divided into three doses, orally for ten days.

Dosage forms: Oral tablets 250 mg.
Vaginal inserts 500 mg.

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*Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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etes mellitus (metabolic acidosis,
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nmediately after surgery where
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ıtic disease; renal disease with
nia; cardiovascular collapse
ck); after disease states
ciated with hypoglycemia.

Warnings: Use during pregnancy is to be avoided.
Precautions: 1. *Starvation Ketosis:* This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**
2. *Lactic Acidosis:* This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.
3. *Hypoglycemia:* Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.
Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake.
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(Continued from Page 536)

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American Radiology Board Names Louisville M.D. As President

Ralph M. Scott, M.D., Professor of Radiology at the University of Louisville School of Medicine, has been elected President of the American Board of Radiology. Director of U of L's Radiation Center, Doctor Scott has been a member of the Board for almost seven years.

The national Board meets twice each year to set national standards in radiology and conducts examinations for physicians who want to specialize in that particular field.



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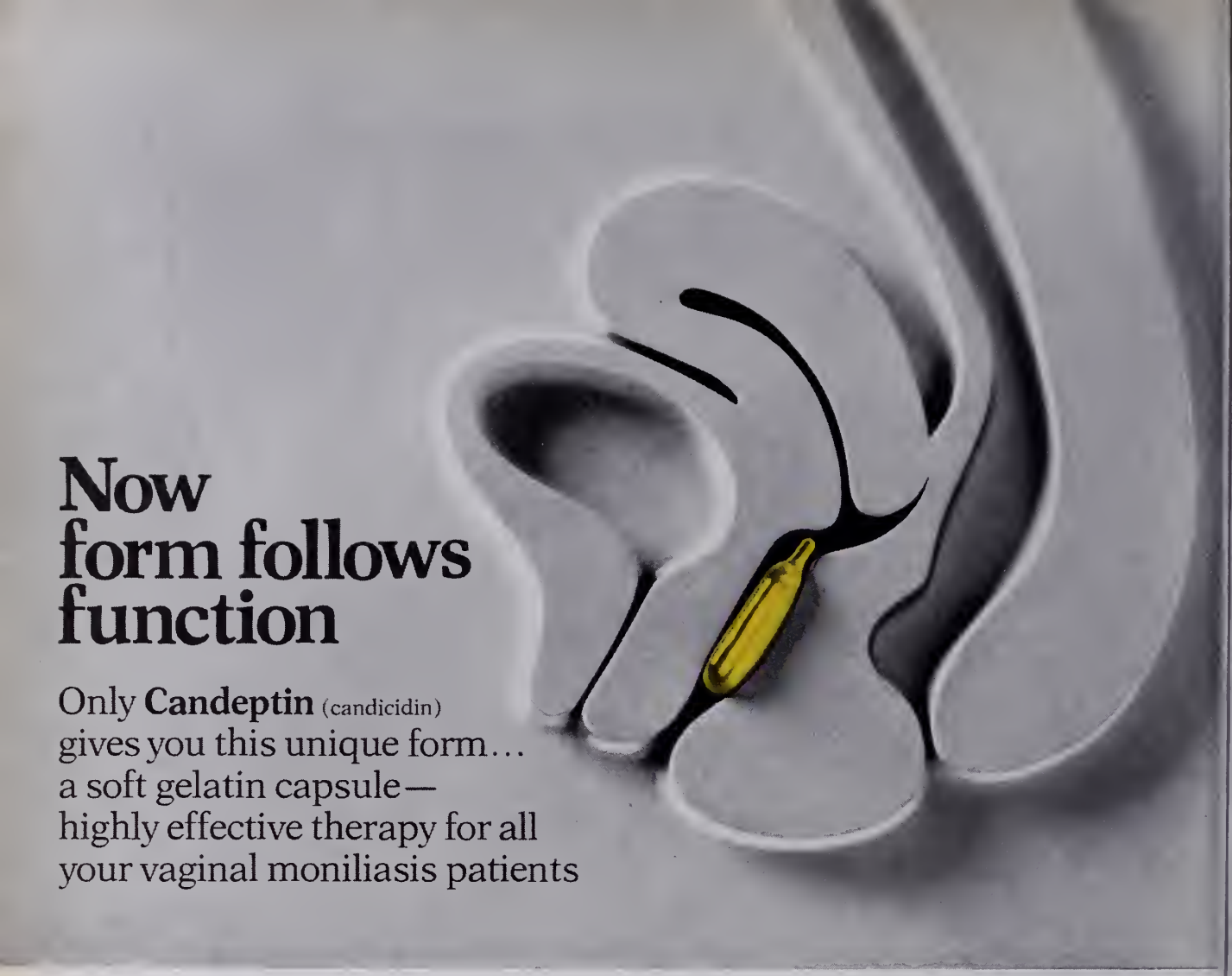
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Action: CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETTES Vaginal Capsules possess anti-monilial activity.
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Caution: During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.
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Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

References: **1.** Olsen, J.R.: Journal-Lancet *85*:287 (July) 1965. **2.** Giorlando, S.W.: Ob/Gyn Dig. *13*:32 (Sept.) 1971. **3.** Decker, A.: Case Reports on File, Medical Department, Julius Schmid. **4.** Giorlando, S.W., Torres, J.F., and Muscillo, G.: Am. J. Obst. & Gynec. *90*: 370 (Oct. 1) 1964. **5.** Lechevalier, H.: Antibiotics Annual 1959-1960. New York, Antibiotica Inc., 1960. pp. 614-618. **6.** Friedel, H.J.: Maryland M.J., *15*:36 (Feb.) 1966.

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SMA Grant Awarded Ky. Doctor

A research project grant was awarded to Donald F. Roney, M.D., Louisville, by the Southern Medical Association. Doctor Roney, from the Department of Anesthesiology at the University of Louisville School of Medicine, was one of 20 researchers selected from more than 100 applicants, to receive an SMA research grant this year.

The Research Project Fund, established in 1969, will help to fund Doctor Roney's project, "Pulmonary and Hemodynamic Effects of Commonly Sold Heroin in Dogs."

KSIM Elects 1972 Officers

Irving F. Kanner, M.D., Lexington, was chosen President-Elect of the Kentucky Society of Internal Medicine at the May 19 meeting of the group in Lexington. Installed as President was Wilfrid C. Gettelfinger, M.D., Louisville, who succeeded John E. Myers, Jr., M.D., Lexington.

The group re-elected A. Evan Overstreet, M.D., Louisville, as its Secretary-Treasurer.

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—George Sarton, from "The History of Medicine Versus the History of Art"

Would it be useful in clinical practice to have government predetermine drugs of choice?

Opinion

Results of a survey of physicians:

13.3%
Yes, it would be useful.

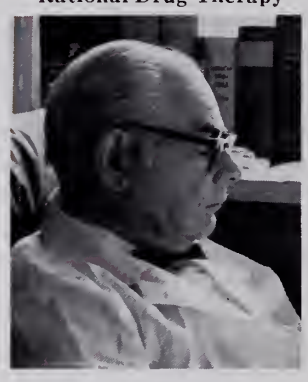
86.7%
No, it would not be useful.

Dialogue

Would it be useful in clinical practic to have government predetermine drugs of choice?

Doctor of Medicine

Walter Modell, M.D.,
Professor of Pharmacology,
Cornell University
Medical College,
Editor,
Clinical Pharmacology
& Therapeutics,
Drugs of Choice,
Rational Drug Therapy



The proposition that government should determine one or two "drugs of choice" within a given therapeutic class reflects the belief that a similarity in molecular structure insures a close similarity in pharmacologic effect. But this is by no means the rule. An obvious example would be in the field of diuretics, where a small change in chemical structure accounts for substantial differences in concomitant effects such as potassium excretion.

Any attempt to dictate the "drug of choice" would be complicated by the fact that some populations demonstrate a bimodal distribution in their reaction to drugs. If the data on drug response are mixed for the total population, one drug will appear to be as useful as the other. But if drug response is reported separately for different segments of the population, drug A will be found to be better for one group and drug B for the other.

It may, of course, be possible to determine drugs of choice in particular categories on a broad statistical basis. But there are always certain patients in whom a drug produces odd, unpredictable or idiosyncratic reactions. So, though a drug might statistically be the most useful one in a given situation, individual variations in response might make it the *incorrect* one.

The point I wish to make is that if two, three, four or more drugs in one class are of approximately equal merit, that in itself is justification for their availability. Exceptional cases do arise in which one drug would be useful to a certain segment of the population and another drug would be of no use at all. In the practice of medicine, the physician must be prepared to treat the routine as well as the unusual case.

Another objection to the determination of a drug of choice is that precise statements of *relative* efficacy are very difficult to make—much more difficult than statements of efficacy. For example, in testing drug efficacy, it is easy to determine the difference between a drug that is effective in treating a condition and one that is not at all effective. Thus, it is fairly easy to determine whether a drug is more effective than a placebo. But if you compare one drug that is effective with another drug that is also effective, and the relative differences between them are very slight, statements of relative efficacy may be very difficult to make with assurance.

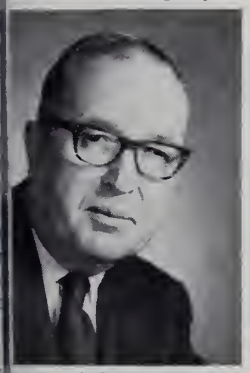
I do not mean to imply that relative efficacy statements are not useful or can never be made. With some groups of drugs (e.g., analgesics), extensive study and precise methodology have yielded useful information on relative efficacy. But in most situations, such information can be acquired only through studies encompassing three to five years of use in many more patients than are used to compare drugs with a placebo for the introduction of a drug into commerce. It is really only after practitioners use a drug extensively that relative safety and efficacy in practice can real determined.

The Bureau of Dru suggested the packa sert as a possible me communicating inform on relative efficacy of to the physician. I fin objectionable, since not believe the phy should have to rely o source for final scie truth. There is also a tical objection: Sinc physicians actuall pense drugs, they s see the package inse any event, I would tain that the phys should know what dr wants and why witho pending on the goverr or the manufacturer him.

Undoubtedly, phys are swamped by exc numbers of drugs in therapeutic categorie I am well aware that drugs within such gories could be elimi without any loss, or haps even some pro the practice of med But, in my opinion, n the FDA nor any single group has the e tise and the wisdom sary to determine th "drug of choice" i areas of medical prac

Maker of Medicine

eth G. Kohlstaedt, M.D.,
Vice President,
Medical Research,
Lilly and Company



my opinion, it is not nction of any governor private regulatory y to designate a "drug ice." This determinaould be made by the ian after he has re- full information on roperties of a drug, en it will be based on perience with this nd his knowledge of dividual patient who ing treatment.

n evaluation of comve efficacy were to be particularly by govnt, at the time a new s being approved for ting, it would be a disservice to medid thus to the patient onsumer. For examen a new therapeunt is introduced, on sis of limited knowlt may be considered more potent, more ive, or safer than cts already on the t. Conceivably, at ime the new drug e labeled "the drug ice." But as addiclinical experience is ulated, new evidence become available. it may be apparent that the established products should not be so easily dismissed.

Variation in patient response to drugs constitutes one of the major obstacles to the determination of "drugs of choice." We are just beginning to open the door on pharmacogenetics, but it is evident that genetic differences cause wide variations in the way drugs are absorbed, metabolized, etc. This fact alone is sufficient to make unrealistic the idea that there is one drug in each class to be used for every human being.

The problem of determining relative drug efficacy is an extremely complicated one. Comparison with other drugs of the same class should not be a prerequisite for marketing a new substance. In some therapeutic areas, it may be difficult to make accurate comparisons. For example, in the treatment of infections it is not possible to conduct crossover studies. Recovery may be influenced by factors which cannot be controlled or measured, i.e., natural host resistance and virulence of infective agents. A drug's acceptability must often be judged on the basis of its own performance, and this may be limited to experience in a relatively small patient population. If the introduction of a new drug must await the adequate establishment of relative efficacy, the duration of clinical trial and extent of studies would be greatly prolonged, particularly for rare or unusual conditions. The availability of a new drug would be delayed. Many patients might suffer needlessly and lives might be lost.

Relative efficacy can best be established by experience in a general patient population through regular channels of clinical practice. The physician considers the patient as a whole, which means the patient often has multiple problems and drugs must be selected with this in mind. Hence, a "drug of choice" in an uncomplicated case may not be the best drug for a patient with associated problems. Publication of well-controlled studies in medical journals may provide comparative evidence; discussions at medical meetings, presentations at postgraduate courses, and the new audiovisual technology may bring evidence to physicians on comparative therapy. In a free medical marketplace, a drug that does not measure up will fall into disuse. For example, broad clinical experience has established vitamin B_{12} as the "drug of choice" for the treatment of primary pernicious anemia. No amount of advertising or promotional effort by the manufacturer could increase the use of liver extract for this anemia. However, a physician may wish to employ parenteral liver preparations for a special purpose.

In the field of surgery, peer review in the hospital has brought significant improvement in the use of new techniques and procedures. Something of this nature would be useful in the area of drug therapy. However, it should be developed by the medical profession itself and would necessitate, for its proper function, an improvement in the dissemination of reliable data on clinical pharmacology of drugs under consideration.

Ideally, information on the relative efficacy of drugs should be gathered and assessed by the physicians who actually administer the specific agents to a specific patient population. To do this, they will need even more information on the drugs they use – information that the pharmaceutical manufacturers must begin to provide if government regulation of *"drugs of choice"* is to be avoided.

Opinion & Dialogue

What is your opinion, doctor?
Send us your comments on the above issue.

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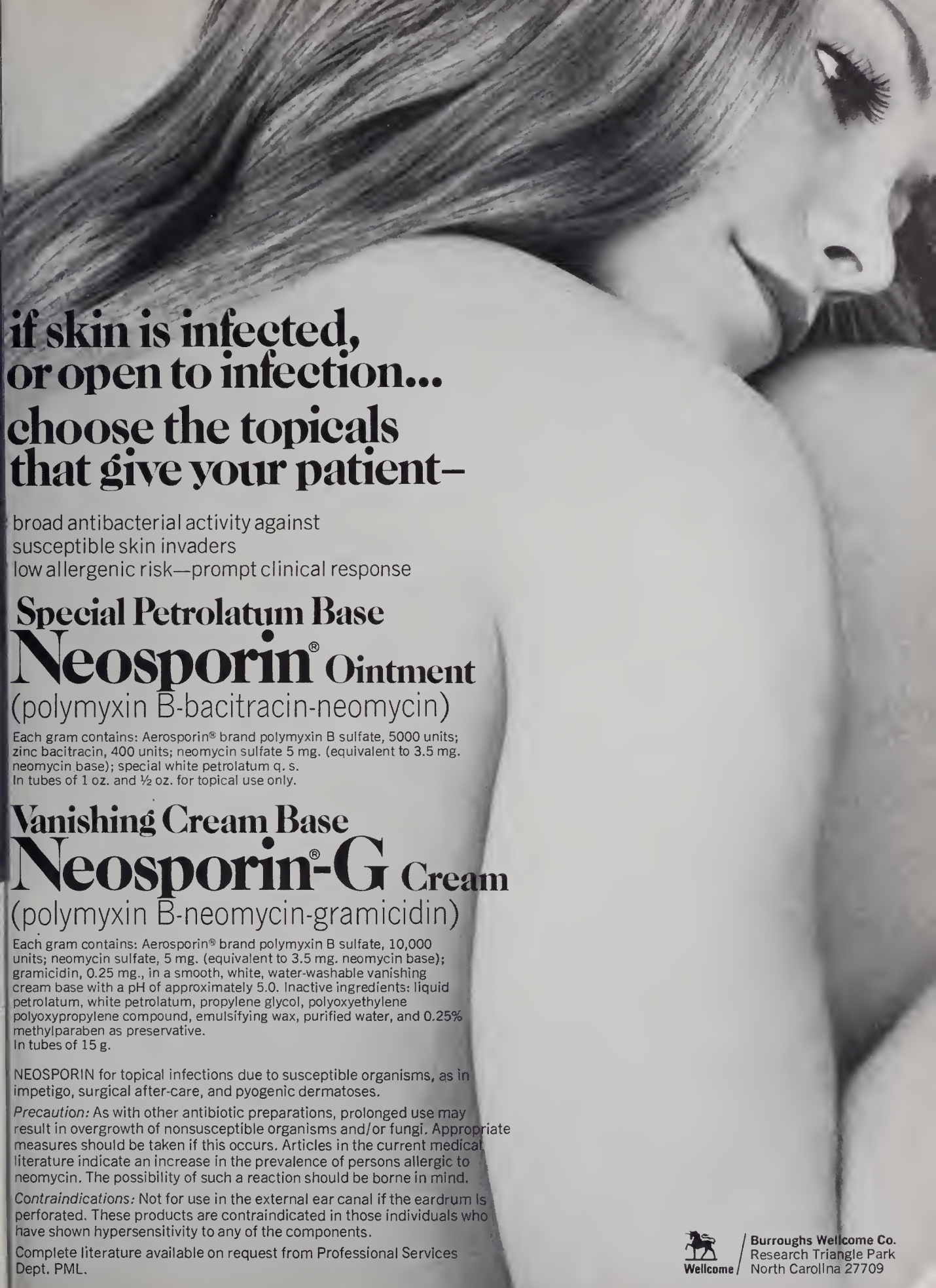
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Neosporin®-G Cream
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services Dept. PML.

Wellcome / **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709



When you select this familiar antibiotic for IV infusion you have available a broad dosage rang that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections. In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomyc hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in wate But when 4 grams or more per day is given, Lincocin should be diluted in r less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

fections caused by susceptible strains
pneumococci, streptococci, and
aphylococci, including penicillin-
sistant strains. Staphylococcal strains
sistant to Lincocin (lincomycin
ydrochloride, Upjohn) have been
covered. Before initiating therapy,
ılture and susceptibility studies should
performed. Lincocin has proved
luable in treating patients hyper-
nsitive to penicillin or cephalosporins,
ıce Lincocin does not share
tigenicity with these compounds.
owever, hypersensitivity reactions
ve been reported, some of these in
tients known to be sensitive to
nicillin.

ell tolerated at infusion site: Lincocin
ravenous infusions have not
oduced local irritation or phlebitis,
ıen given as recommended. Lincocin
ısually well tolerated in patients who
e hypersensitive to other drugs.
evertheless, Lincocin should be used
utiously in patients with asthma or
nificant allergies.

patients with impaired renal function,
e recommended dose of Lincocin
ould be reduced to 25—30% of
e dose for patients with normal
lney function. Its safety in
egnant patients and in infants
s than one month of age has
t been established.

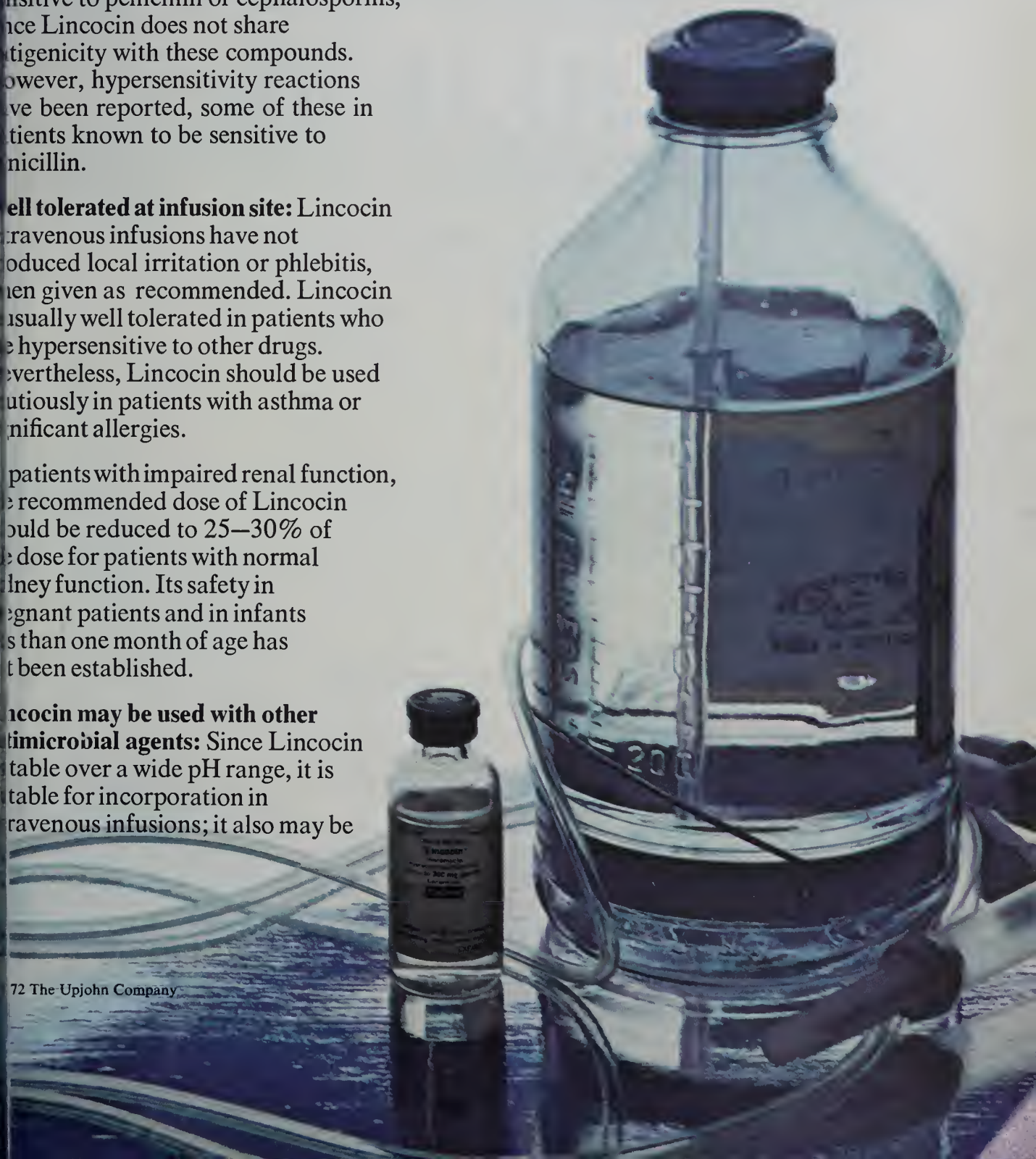
ıcocin may be used with other
timicrobial agents: Since Lincocin
table over a wide pH range, it is
table for incorporation in
ravenous infusions; it also may be
administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



72 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatm *Skin and mucous membranes*—Skin ras urticaria, vaginitis, and rare instances of foliative and vesiculobullous dermatitis h been reported. *Liver*—Although no direc lationship to liver dysfunction is establis jaundice and abnormal liver function (particularly serum transaminase) have b observed in a few instances. *Cardiovasc* —Instances of hypotension following pa teral administration have been repor particularly after too rapid IV admini tion. Rare instances of cardiopulmonary rest have been reported after too rapid administration. If 4.0 grams or more adi istered IV, dilute in 500 ml of fluid administer no faster than 100 ml per h *Special senses*—Tinnitus and vertigo h been reported occasionally. *Local react* —Excellent local tolerance demonstrate intramuscularly administered Linco (lincomycin hydrochloride). Reports of following injection have been infrequ Intravenous administration of Lincoci 250 to 500 ml of 5% glucose in dist water or normal saline has produced local irritation or phlebitis.

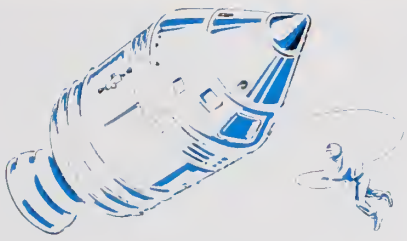
HOW SUPPLIED: *250 mg* and *500* Capsules—bottles of 24 and 100. *St Solution, 300 mg per ml*—2 and 10 ml and 2 ml syringe. *Syrup, 250 mg per* —60 ml and pint bottles.

For additional product information, co the package insert or see your Upj representative.

MED B-6-S (KZL-7) JA71-1

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Kalamazoo, Michigan 49001

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Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

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NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, *300 mg.;* SODIUM ACID PHOSPHATE, *500 mg.*

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Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

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Will his return to work mean the return of undue psychic tension?



When it's mandatory to keep the post-coronary patient calm, consider Valium (diazepam).

Although he's promised to take it easy back on the job, you know he's going back to the same stressful circumstances that may have contributed to his hospitalization. If he experiences excessive anxiety and tension because of overreaction to stress, your prescription for Valium can bring relief. During the period of readjustment Valium can quiet undue anxiety.

For moderate states of psychic tension, 5-mg or 2-mg Valium tablets *b.i.d.* to *q.i.d.* can usually provide reliable relief. For severe tension/anxiety states, the 10-mg tablets often produce desired results.

The most commonly reported side effects are drowsiness, ataxia and fatigue. Until individual response is determined, caution patient against driving or operating dangerous machinery.

Valium® (diazepam)

For the tense cardiac patient who must be kept calm

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults:* Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children:* 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose ® packages of 1000.

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VOLUME 70 AUGUST 1972 NUMBER 8

The Journal of The KENTUCKY Medical Association

Annual Meeting Issue



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We would like to call your attention to the change in The Journal cover. A drawing of the building addition has been added to the KMA Headquarters Office Building.



Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling
and the psychotropic action of Valium® (diazepam).

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

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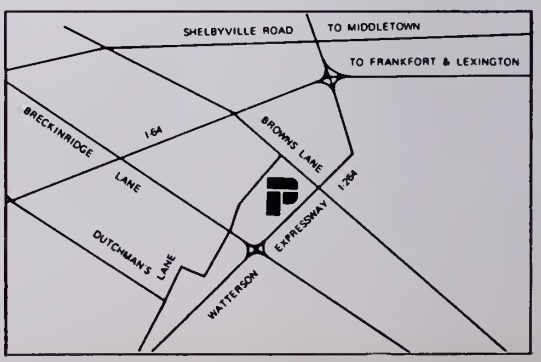
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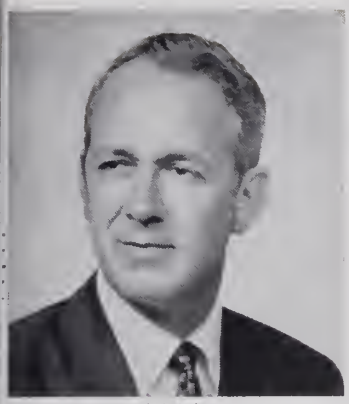
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General Leasing Corparatian S87
Haspital Affiliates, Inc. S88
Lilly, Eli, and Campany S96
Medical Pratective Campany 648
Merck Sharp & Dahme S84-S85
Pharmaceutical Manufacturers Assaciatian S93-S95
Paythress, Wm. P. & Campany 650
Rache Labarataries 574-575, S82-S83, S88-S89, 653-655, 662
Searle, G. D. & Campany 618-620
Schmid, Julius, Inc. S86-S87
Sheratan Inn—Lauisville East S90
Sauthern Optical Campany S90
St. Matthews Campany S76
Stauffer's Louisville Inn 661
Stuart Pharmaceuticals, Div. af ICI America 617
Upjahn Campany, The 658-660

MESSAGE FROM THE PRESIDENT



AS THE KMA year draws to a close, it is always nice to reflect back on the accomplishments and often bask in their glory. Yet, even though we have accomplished a great deal, we must do much more to preserve our voluntary practice of medicine.

The Kentucky Foundation for Medical Care became a reality during the past Associational year, and we now have a method of actually delineating the economics of medicine. The Foundation may, in fact, become the economic spokesman for KMA and will be in the forefront of the legislative fight.

Claims and utilization studies continue to attract publicity and also cause problems among physicians, particularly those who are non-participating physicians. It does seem somewhat paradoxical that many physicians will not voluntarily participate, while we all know that compulsory participation is close to being a reality.

The year 1972-73 will be a fateful one for medicine and it is imperative that all of us get behind our officers and leaders in an attempt to bring forth publicly the good points of voluntary medicine. Each of you can start by attending the KMA Annual Meeting next month and express your ideas to your elected representatives. Your help, understanding and cooperation during 1972-73 will certainly be needed and appreciated by your officers and Board of Trustees.

David A. Hull

DAVID A. HULL, M.D.
CHAIRMAN, KMA BOARD OF TRUSTEES

This is the fourth in a series of articles written at the request of KMA President, John S. Harter, M.D.



Usual, Customary and Reasonable Fees

WHEN we first began to hear about the usual, customary and reasonable fees concept, it seemed fairly simple to understand, but the more we hear about it and the more third party payers who offer this type of coverage, the more confusing it becomes.

At the recent AMA Convention in San Francisco, Tennessee's delegation submitted to the Convention a resolution branding Aetna's prevailing fee profiles as arbitrary, accusing the company of fomenting unnecessary doctor-patient litigation, and recommending that all carriers which follow such procedures be censured.

Aetna has been reimbursing for physicians charges only to the extent that those charges do not exceed locally prevailing fees, fees determined by profiles in Aetna's own records. When any portion of a claim is disallowed, the carrier notifies its policyholder in writing that the doctor's charge exceeds the prevailing fee; and the carrier states that under certain circumstances, it will pay legal costs for a patient who is sued by a physician seeking to recover disallowed fees.

Aetna reportedly constructed its prevailing fee profiles without seeking help from physicians; and in some cases, established peer review mechanisms were bypassed when Aetna's controversial claims letters were sent to patients.

A spokesman for the company said Aetna had certain obligations to its policyholders, but he stressed that this obligation would extend to the courtroom only "in the very rare event that the physician sues" a patient to recover disallowed fees in cases where all other remedies have failed and there was no advance agreement on fees between physician and patient.

It has been the understanding of most physicians that usual and customary fees certainly were not binding on physicians who did not sign an agreement with the carrier and that the doctor has the right to bill for his services at whatever he thinks his services are worth. When the carrier writes a letter to the policyholder telling him that the carrier will bear the expenses of a suit in case a physician sues him for nonpayment, he is telling the policyholder not to pay the bill. It is doubtful that suits by doctors to recover fees from patients are very commonplace in Tennessee. Certainly this is not a common practice in Kentucky. Let us hope that this type of letter writing which encourages the patient not to pay his bills does not extend to Kentucky.

After several motions, substitute motions and substitutes for the substitutes were presented to the House of Delegates at the AMA, a resolution was finally approved which asked multilateral, and not unilateral development of fee profiles; stresses the importance of using peer review mechanisms to resolve disputes prior to threats of litigation; decries any action that foments unnecessary litigation; reminds physicians of their right to enter prior agreements with patients on fees for services to be rendered; directs the Council on Medical Service to meet with Aetna to resolve the current problem; and asks that all carriers be informed of the AMA policy.

LEWIS DICKINSON, M.D.

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 38-year-old, married, white, G 8, Para 3, AB 4, was under the care of a private physician. She had delivered a 6 lb 16 oz girl in 1959, a 6 lb 10 oz boy in 1961 and a 7 lb 10 oz girl in 1964. She had one of her miscarriages at this hospital, requiring a D & C on 6-20-68. The last normal menstrual period was 6-6-69, total weight gain was 20 lbs with no prenatal problems. She was admitted to the hospital 3-26-70 at 12:20 a.m. having contractions every five minutes. The fetal heart rate was 160. Her blood pressure was 142/90, temperature was 98, pulse 72, respirations 20.

Vaginal examination on admission revealed membranes intact, the cervix a loose finger dilated, cephalic presentation at -1 station. At 1:05 a.m. vaginal exam revealed still only a finger dilatation, with strong contractions. She was having back discomfort and was given 25 mg of Phenergan, 50 mg of Demerol, 1/150 grain of Hyoscine IM at 1:10 a.m. At 1:30 vaginal exam revealed the cervix 2½ to three fingers dilated, at -1 station. At 1:40 she was three fingers dilated, at -1 station. The contractions were very firm and she complained of back discomfort.

Her physician was called and notified of her progress. At 1:43 a.m. the patient was found to be cyanotic, with no respirations or pulse. She was unresponsive. A physician in the hospital was called. External cardiac massage with resuscitation was started and 1,000 cc of Ringer's lactate IV instituted. Adrenalin 1:1000 IV, sodium bicarbonate IV, 500 cc of whole blood type O-negative were given. She was defibrillated but did not respond. Emergency Cesarean section was performed. A female infant, stillborn, weighing 6 lbs was delivered at 1:55 a.m. She failed to respond to resuscitation attempts and was pronounced dead at 2:10 a.m.

An autopsy was obtained. The significant findings were limited to the microscopic examination of the lungs. Sections from multiple blocks of the lungs taken through hemorrhagic areas seen on gross examination showed very striking changes. There were very numerous radicals of the pulmonary artery that had a large number of squamous cells in the lumen. In many instances the fluid accompanying the squamous cells contained a brown pigment consistent with bile pigment. In addition the lungs showed relatively large amounts of hemorrhage, in many instances filling the alveoli spaces. There were occasional alveoli that contained a pink-staining fluid filling much of the space. In some instances this fluid could be identified in vascular spaces. There were some vessels that showed what appeared to be early fibrin formation.

The brain showed no significant histologic changes. The liver showed some hemorrhage, in one instance what appeared to be an organizing fibrin thrombus was present. Sections of the kidney showed very marked capillary congestion and in many instances, there were what appeared to be fibrin formed in the capillaries. This extended into the glomerular tufts in many reactions.

Sections of the heart showed no histologic abnormal changes. The adrenal showed some foci of hemorrhage.

Final Diagnosis: (1) Extensive amniotic fluid embolization of the lungs with some fibrin clots and evidence of extensive hemorrhage. (2) Generalized intravascular congestion and some evidence of fibrin thrombi.

Comment

This was classified a direct obstetric death with no preventable factors. The correct cause of death was confirmed by autopsy, demonstrating the value of such an examination. In these cases 10,000 units of IV Heparin are

(Continued on Page 651)

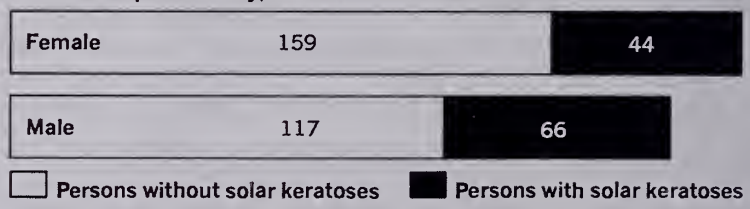
What it means to live and work in Tipton County, Tennessee

Persons who are white and over 40 have one chance in four of having solar keratoses... which may be premalignant

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

Prevalence of solar keratoses in white persons over 40 in Tipton County, Tennessee



*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction (only in affected areas)* usually occurs within two weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Cosmetic results

Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

5% cream–a Roche exclusive

Only Roche formulates the 5% cream... high in patient acceptability... high in clinical efficacy, especially for lesions of hands and forearms... economical.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

an alternative to conventional therapy

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(fluorouracil)

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Pinworm therapy is often a family affair





Contraindications: History of hypersensitivity to thiabendazole.
Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.
Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction, patients should be carefully monitored.
Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live Ascaris in the mouth and nose. Hypersensitivity reactions

A New Dosage Form:

Chewable Tablets 500 mg Mintezol®

(THIABENDAZOLE | MSD)



so easy to take everyone in the family will keep to the regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.
Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

addendum

INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infestations, whether encountered singly or in combination. Dosages are weight related; therefore, a weight-dose chart is included in the Direction Circular for your convenience when writing a prescription. MINTEZOL should be given after meals if possible.

INDICATIONS	DOSAGE (1st Day)	ADDITIONAL REGIMEN	COMMENTS
Pinworm disease	Two doses of 1 tablet/50 lb	Repeat 7 days later	This regimen is designed to reduce the risk of reinfection. However, if not practical, repeat the regimen the next day.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses of 1 tablet/50 lb	Repeat the next day	Alternatively, a single dose of 2 tablets/50 lb may be given. However, a higher incidence of side effects should be expected.
Creeping eruption	Two doses of 1 tablet/50 lb	Repeat the next day	If active lesions are still present 2 days after completing this regimen, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses of 1 tablet/50 lb	Repeat for 2 to 4 successive days	The optimal dosage for the treatment of trichinosis has not been established.

The recommended maximal daily dosage is 3 g (6 tablets).

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



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The highly effective candicidin for all your vaginal moniliasis patients.

First came CANDEPTIN (candicidin) Tablets for intravaginal use. Then CANDEPTIN Ointment to treat labial involvement and for intravaginal use. Now unique **CANDEPTIN VAGELETTES**—candicidin ointment in soft gelatin capsules—extend the range of CANDEPTIN therapy to even your pregnant and virginal patients (you merely cut off the narrow tip and extrude the contents through the intact hymen).

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CANDEPTIN brings your patients prompt relief of itching, burning and discharge—usually within 72 hours.[1] A single, 14-day course of treatment is usually all that's needed for a complete cure.[2,3,4]

Significantly more potent *in vitro* than nystatin.[5] CANDEPTIN Tablets and Ointment have shown clinical cure rates of 90% and higher in both pregnant and non-pregnant patients.[1,4,6] And in recent studies of **CANDEPTIN VAGELETTES** Vaginal Capsules involving both pregnant and non-pregnant patients, a 100% culture-confirmed cure rate was achieved with a single 14-day course of therapy.[2,3]

Only CANDEPTIN gives you a dosage form for every therapeutic need, plus *eight years' clinical proof* of potency. Consider CANDEPTIN for your next vaginal moniliasis patient.

CANDEPTIN®
(candicidin)

Description: CANDEPTIN (candicidin) Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% Candicidin activity in U.S.P. petrolatum. 3 mg. of Candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candicidin powder equivalent to 3 mg. (0.3%) Candicidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETTES Vaginal Capsules contain 3 mg. of Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.
Action: CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETTES Vaginal Capsules possess anti-monilial activity.
Indications: Vaginitis due to Candida albicans and other Candida species.
Contraindications: Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETTES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.
Caution: During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.
Adverse Reaction: Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETTES Vaginal Capsules have been extremely rare.
Dosage: One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETTES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.
Available Dosage Forms: CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETTES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

References: **1.** Olsen, J.R.: Journal-Lancet *85* 287 (July) 1965. **2.** Giorlando, S.W.: Ob/Gyn Dig. *13*:32 (Sept.) 1971. **3.** Decker, A. Case Reports on File, Medical Department, Julius Schmid. **4.** Giorlando, S.W., Torres, J.F., and Muscillo, G.: Am. J. Obst. & Gynec. *90*: 370 (Oct. 1) 1964. **5.** Lechevalier, H.: Antibiotics Annual 1959-1960. New York, Antibiotica Inc., 1960. pp. 614-618. **6.** Friedel, H.J.: Maryland M.J., *15*:36 (Feb.) 1966.

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Gantrisin® (sulfisoxazole) Roche® provides your patients with many important advantages:

- high urinary levels
- generally good tolerance
- high solubility at average urinary pH
- rapid absorption
- rapid renal clearance
- high plasma concentrations
- economy (average cost of therapy: less than 6½¢ per tablet)

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic urinary tract infections (primarily cystitis, pyelitis, pyelonephritis) due to susceptible organisms (usually *E. coli, Klebsiella Aerobacter, Staphylococcus aureus, Proteus mirabili* and less frequently, *Proteus vulgaris*) in the absence obstructive uropathy or foreign bodies.

IMPORTANT NOTE: *In vitro* sulfonamide sensitivity tes are not always reliable. The test must be carefully coord nated with bacteriologic and clinical response. When th patient is already taking sulfonamides, follow-up cultur should have aminobenzoic acid added to the culture medi

Currently, the increasing frequency of resistant organism is a limitation of the usefulness of antibacterial agents i cluding the sulfonamides, especially in the treatment chronic and recurrent urinary tract infections.

Free sulfonamide blood levels should be measured in p tients receiving sulfonamides for serious infections sinc there may be wide variations with identical doses; 20 mg 100 ml should be maximum total sulfonamide level, adverse reactions occur more frequently above this leve

Contraindications: Hypersensitivity to sulfonamides, i fants less than 2 months of age (except adjunctively wi pyrimethamine in congenital toxoplasmosis), pregnanc at term, and during the nursing period.

Warnings: Safety of sulfonamides in *pregnancy* has n been established. Sulfonamides will not eradicate grou A streptococci. Deaths associated with sulfonamide a ministration have been reported from hypersensitivi reactions, agranulocytosis, aplastic anemia and oth blood dyscrasias. Clinical signs such as sore throat, feve pallor, purpura or jaundice may be early indications serious blood disorders. Complete blood counts ar urinalyses with careful microscopic examination shou be performed frequently during sulfonamide therapy.

Precautions: Use with caution when impaired renal hepatic function, severe allergy or bronchial asthma present. In glucose-6-phosphate dehydrogenase-deficie individuals, hemolysis (frequently a dose-related re tion) may occur. Maintain adequate fluid intake to pr vent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytos aplastic anemia, thrombocytopenia, leukopenia, hem lytic anemia, purpura, hypoprothrombinemia, methem globinemia. *Allergic reactions:* Erythema multiforme (St vens-Johnson syndrome), generalized skin eruption epidermal necrolysis, urticaria, serum sickness, pruritu exfoliative dermatitis, anaphylactoid reactions, perior tal edema, conjunctival and scleral injection, photosen tization, arthralgia, allergic myocarditis. *Gastrointestin reactions:* Nausea, emesis, abdominal pains, hepatit diarrhea, anorexia, pancreatitis, stomatitis. *C.N.S. re tions:* Headache, peripheral neuritis, mental depressio convulsions, ataxia, hallucinations, tinnitus, vertigo, i somnia. *Miscellaneous reactions:* Drug fever, chills, to nephrosis with oliguria and anuria. Periarteritis nodo and L.E. phenomenon have occurred with sulfonami therapy. Sulfonamides bear certain chemical similariti to some goitrogens, diuretics and oral hypoglycem agents. Goiter production, diuresis and hypoglycem have occurred rarely in patients receiving sulfonamid Cross-sensitivity may exist with these agents.

Supplied: Tablets containing 0.5 Gm sulfisoxazole.

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acute, recurrent or chronic **nonobstructed cystitis**

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4.

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Gantrisin reaches its sites of action quickly. Measurable levels of the drug have been found in blood and urine within 60 minutes; in 2 to 3 hours, therapeutic levels usually have been reached.

5.

Rapid renal clearance

Gantrisin's rapid excretion rate is another reason why it is generally well tolerated. Over 50% of a single oral dose is excreted in 8 hours, over 90% in 24 to 48 hours, so there is little risk of hematuria or crystalluria, and anuria is rare. As with all sulfonamides, adequate fluid intake must be maintained. Complete blood counts and urinalyses, with careful microscopic examination, should be performed frequently.

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ortant Note: This drug is not a simple analgesic. ıot administer casually. Carefully evaluate patients ıre starting treatment and keep them under close ervision. Obtain a detailed history, and complete sical and laboratory examination (complete ıogram, urinalysis, etc.) before prescribing and at uent intervals thereafter. Carefully select patients, iding those responsive to routine measures, con- ndicated patients or those who cannot be observed uently. Warn patients not to exceed recommended age. Short-term relief of severe symptoms with smallest possible dosage is the goal of therapy. age should be taken with meals or a full glass of t. Patients should discontinue the drug and report iediately any sign of: fever, sore throat, oral ons (symptoms of blood dyscrasia); dyspepsia, gastric pain, symptoms of anemia, black or tarry ols or other evidence of intestinal ulceration or ıorrhage, skin reactions, significant weight gain or ma. A one-week trial period is adequate. Discon- e in the absence of a favorable response. Restrict ıtment periods to one week in patients over sixty. *ications:* Acute gouty arthritis, rheumatoid arthritis, umatoid spondylitis.

ıtraindications: Children 14 years or less; senile ients; history or symptoms of G.I. inflammation or eration including severe, recurrent or persistent pepsia; history or presence of drug allergy; blood crasias; renal, hepatic or cardiac dysfunction; ertension; thyroid disease; systemic edema; matitis and salivary gland enlargement due to the g; polymyalgia rheumatica and temporal arteritis; ients receiving other potent chemotherapeutic nts, or long-term anticoagulant therapy.

rnings: Age, weight, dosage, duration of therapy, stence of concomitant diseases, and concurrent ent chemotherapy affect incidence of toxic reac- ns. Carefully instruct and observe the individual ient, especially the aging (forty years and over) have increased susceptibility to the toxicity of the g. Use lowest effective dosage. Weigh initially redictable benefits against potential risk of severe, n fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

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—George Sarton, from "The History of Medicine Versus the History of Art"

Would it be useful in clinical practice to have government predetermine drugs of choice?

Opinion

Results of a survey of physicians:

13.3%
Yes, it would be useful.

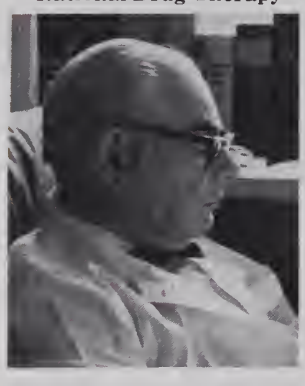
86.7%
No, it would not be useful.

Dialogue

Would it be useful in clinical practic to have government predetermine drugs of choice?

Doctor of Medicine

Walter Modell, M.D.,
Professor of Pharmacology,
Cornell University
Medical College,
Editor,
Clinical Pharmacology
& Therapeutics,
Drugs of Choice,
Rational Drug Therapy



The proposition that government should determine one or two "drugs of choice" within a given therapeutic class reflects the belief that a similarity in molecular structure insures a close similarity in pharmacologic effect. But this is by no means the rule. An obvious example would be in the field of diuretics, where a small change in chemical structure accounts for substantial differences in concomitant effects such as potassium excretion.

Any attempt to dictate the "drug of choice" would be complicated by the fact that some populations demonstrate a bimodal distribution in their reaction to drugs. If the data on drug response are mixed for the total population, one drug will appear to be as useful as the other. But if drug response is reported separately for different segments of the population, drug A will be found to be better for one group and drug B for the other.

It may, of course, be possible to determine drugs of choice in particular categories on a broad statistical basis. But there are always certain patients in whom a drug produces odd, unpredictable or idiosyncratic reactions. So, though a drug might statistically be the most useful one in a given situation, individual variations in response might make it the *incorrect* one.

The point I wish to make is that if two, three, four or more drugs in one class are of approximately equal merit, that in itself is justification for their availability. Exceptional cases do arise in which one drug would be useful to a certain segment of the population and another drug would be of no use at all. In the practice of medicine, the physician must be prepared to treat the routine as well as the unusual case.

Another objection to the determination of a drug of choice is that precise statements of *relative* efficacy are very difficult to make—much more difficult than statements of efficacy. For example, in testing drug efficacy, it is easy to determine the difference between a drug that is effective in treating a condition and one that is not at all effective. Thus, it is fairly easy to determine whether a drug is more effective than a placebo. But if you compare one drug that is effective with another drug that is also effective, and the relative differences between them are very slight, statements of relative efficacy may be very difficult to make with assurance.

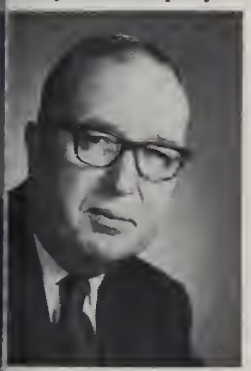
I do not mean to imply that relative efficacy statements are not useful or can never be made. With some groups of drugs (e.g., analgesics), extensive study and precise methodology have yielded useful information on relative efficacy. But in most situations, such information can be acquired only through studies encompassing three to five years of use in many more patients than are used to compare drugs with a placebo for the introduction of a drug into commerce. It is really only after practitioners use a drug extensively that relative safety and efficacy in practice can really determined.

The Bureau of Drugs suggested the package sert as a possible mean communicating informa on relative efficacy of dr to the physician. I find objectionable, since I not believe the physi should have to rely on source for final scien truth. There is also a p tical objection: Since physicians actually pense drugs, they sel see the package insert any event, I would m tain that the physic should know what dru wants and why without pending on the governm or the manufacturer to him.

Undoubtedly, physic are swamped by exces numbers of drugs in s therapeutic categories. I am well aware that m drugs within such c gories could be elimin without any loss, or haps even some profit the practice of medic But, in my opinion, nei the FDA nor any o single group has the ex tise and the wisdom ne sary to determine the "drug of choice" in areas of medical practi

Maker of Medicine

eth G. Kohlstaedt, M.D.,
Vice President,
Medical Research,
Lilly and Company



my opinion, it is not
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become available.
, it may be apparent that the established products should not be so easily dismissed.

Variation in patient response to drugs constitutes one of the major obstacles to the determination of "drugs of choice." We are just beginning to open the door on pharmacogenetics, but it is evident that genetic differences cause wide variations in the way drugs are absorbed, metabolized, etc. This fact alone is sufficient to make unrealistic the idea that there is one drug in each class to be used for every human being.

The problem of determining relative drug efficacy is an extremely complicated one. Comparison with other drugs of the same class should not be a prerequisite for marketing a new substance. In some therapeutic areas, it may be difficult to make accurate comparisons. For example, in the treatment of infections it is not possible to conduct crossover studies. Recovery may be influenced by factors which cannot be controlled or measured, i.e., natural host resistance and virulence of infective agents. A drug's acceptability must often be judged on the basis of its own performance, and this may be limited to experience in a relatively small patient population. If the introduction of a new drug must await the adequate establishment of relative efficacy, the duration of clinical trial and extent of studies would be greatly prolonged, particularly for rare or unusual conditions. The availability of a new drug would be delayed. Many patients might suffer needlessly and lives might be lost.

Relative efficacy can best be established by experience in a general patient population through regular channels of clinical practice. The physician considers the patient as a whole, which means the patient often has multiple problems and drugs must be selected with this in mind. Hence, a "drug of choice" in an uncomplicated case may not be the best drug for a patient with associated problems. Publication of well-controlled studies in medical journals may provide comparative evidence; discussions at medical meetings, presentations at postgraduate courses, and the new audio-visual technology may bring evidence to physicians on comparative therapy. In a free medical marketplace, a drug that does not measure up will fall into disuse. For example, broad clinical experience has established vitamin B_{12} as the "drug of choice" for the treatment of primary pernicious anemia. No amount of advertising or promotional effort by the manufacturer could increase the use of liver extract for this anemia. However, a physician may wish to employ parenteral liver preparations for a special purpose.

In the field of surgery, peer review in the hospital has brought significant improvement in the use of new techniques and procedures. Something of this nature would be useful in the area of drug therapy. However, it should be developed by the medical profession itself and would necessitate, for its proper function, an improvement in the dissemination of reliable data on clinical pharmacology of drugs under consideration.

Ideally, information on the relative efficacy of drugs should be gathered and assessed by the physicians who actually administer the specific agents to a specific patient population. To do this, they will need even more information on the drugs they use – information that the pharmaceutical manufacturers must begin to provide if government regulation of *"drugs of choice"* is to be avoided.

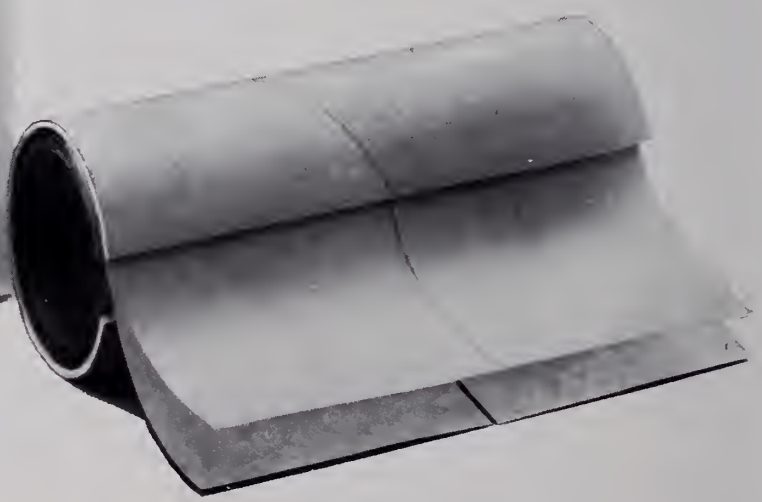
Opinion & Dialogue

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A Clinical Evaluation of The Ultrasonic Sensor in Obstetrical Practice†

Arthur J. Donovan, M.D., Thomas J. Ciaccio, M.D., and
Walter M. Wolfe, M.D.

Louisville, Kentucky

Part I: The Detection of Fetal Life In Utero

Fetal life was detected as early as 10 weeks after the last menses with the ultrasonic sensor. The ultrasonic sensor is more reliable than fetal electrocardiography in the diagnosis of early fetal life.

THE Doppler phenomenon has long been recognized in physical science and recently has been applied to medicine for the diagnosis of arterial occlusion, alterations in renal blood flow velocity and the early diagnosis of fetal life. The Doppler phenomenon is a principle which states that sound or radio waves return to a source at a slightly altered frequency if they are reflected from a moving object and exactly the same frequency if reflected from a stationary object. The ultrasonic sensor operates by this physical principle. A sound wave is transmitted at a constant frequency and intensity and the receiver receives only alterations to this wave pattern. The ultrasound is transmitted into the body and reflected from the internal structures. The sound waves reflected from motionless structures return at precisely the same frequency and are not converted into audible signals. Waves returning from moving structures are slightly shifted in frequency and are converted into audible sound by the ultrasound instrument.

The stethoscope is the usual method for detecting fetal heart sounds but is rarely useful prior to the 16th week of pregnancy and may be unreliable later in pregnancy depending on patient size, hydramnios, fetal position and a variety of extraneous factors, such as room noise and quality of equipment. Fetal electrocardiography permits demonstration of fetal complexes as early as 18 to 20 weeks from cessation of menses, but general utilization is not feasible due to instrument cost and the necessity for special skill for use and interpretation.

Callagan (1964) suggested the use of ultrasound for the early detection of fetal life[4]. Johnson (1965) in 25 cases showed that the fetal heart could be detected at 10 weeks gestation in selected cases and consistently at 12 weeks gestation[7]. Comparison with fetal electrocardiograms showed one positive fetal electrocardiogram appearing 14 weeks from cessation of menses and two at 16 weeks gestation. He concluded from his small series that

†*From the Department of Obstetrics and Gynecology, University of Louisville School of Medicine, Louisville*

fetal life could be detected consistently earlier by the ultrasonic sensor than any other existing method. Bishop (1966) again demonstrated the case with which the fetal heart tones could be detected during pregnancy and expanded the use of diagnostic ultrasound to placental localization[3]. Bernstine (1966)[2] also demonstrated reliability for the detection of the fetal heart using the ultrasonic sensor. The purpose of our project was to compare the ultrasonic sensor with fetal electrocardiography in the detection of fetal life *in utero*.

At the present time there have been no untoward reactions reported secondary to the use of ultrasound for diagnostic examination in either mother or fetus. The power level of 0.0028 watts/cm^2 is far below the 2 to 4 watts/cm^2 required for therapeutic ultrasound used in physical therapy and exponentially below the level used for tissue destruction which is 100 watts/cm^2. Smyth (1964)[14], Baum and Greenwood (1960)[1], Sunden (1964), and Kersten (1963)[8] have all shown no deleterious effects attributable to ultrasound in animal experimentation.

Method

The ultrasonic sensor used in this study is a small portable unit consisting of a transmitter-receiver and power pack with rechargeable battery.*

The probe transducer is placed on the maternal abdomen after application of a suitable coupling medium, such as jelly or water, since ultrasound waves are not transmitted well through air. The probe is then slowly moved in position and manipulated in direction until an audible signal is detected. The movement of placental vessels and cord may be detected in very early pregnancies rather than the high pitch staccato sounds of the fetal heart, but the fetal pulse can be easily distinguished from the maternal. An examination was determined to be negative if no fetal sounds were detected after 15 minutes.

Fetal electrocardiograms were obtained with a Cambridge Versascribe III electrocardiograph, run at 25 mm/sec, or 50 mm/sec. Two standard ECG electrodes were used, the lower one was placed just superior to the pubic hair line, the upper electrode inferior and, in some cases, superior to the umbilicus. Standard ECG paste was used as the contact agent. All the recordings were made by three ECG technicians and the tracings interpreted by a cardiologist.

1. Doptone, Smith Kline Instrument Company, Philadelphia, Pennsylvania.
2. Magnaflux MD-500, Magnaflux Corporation, Chicago, Illinois.

Results

Ninety-nine attempts at fetal heart detcction were carried out in 65 subjects prior to the 18th week of gestation using the ultrasonic sensor and standard technique for fetal electrocardiography. The results are summarized in Table I.

There were no positive fetal electrocardiograms prior to the 14th week of gestation. The earliest detection of the fetal heart using the ultrasonic sensor occurred at 10 weeks from cessation of menses. We were able to detect fetal heart sounds in 50% of the cases attempted at this period of gestation. From 11 to 17 weeks we were able to determine a fetal pulse in 93% of the cases attempted. At 14 and 15 weeks gestation we obtained two negative readings with the ultrasonic sensor.

Comment

Our results are in agreement with the literature on the Doppler recording of the fetal heart, which become reliable at 13 weeks gestation[2, 3, 4, 7].

Hon (1965)[5] and Levine and Weiss (1966)[10] report inaccuracy in the detection of early fetal life with electrocardiography. Our results are in agreement with these reports on fetal electrocardiography determinations. We have shown that the ultrasonic sensor is more reliable than the fetal electrocardiography in the early diagnosis of fetal life and consistently obtains a fetal pulse earlier than the fetal electrocardiogram. These findings are useful in the diagnosis of missed abortion, hydatidiform mole and multiple pregnancy. These problems present themselves during the difficult 12-16 week period of gestation and early detection of fetal heart sounds with reliability is of great value in differential diagnosis.

The ultrasonic sensor was of great value in

the diagnosis of fetal death *in utero*. Many of these cases are equivocal prior to examination with the ultrasonic sensor. There was only one failure to hear a fetal pulse on a patient at six months gestation with a twin pregnancy and massive hydramnios. Another asset of the ultrasonic sensor proved to be a great sense of satisfaction given to the patient if her pregnancy was in doubt and she was able to hear the fetal heart.

Table I

Week	Ultrasonic Sensor Positive	Ultrasonic Sensor Negative	ECG Positive	ECG Negative
9	0	2	0	2
10	3	3	0	6
11	12	3	0	15
12	10	2	0	12
13	10	0	0	10
14	18	2	2	18
15	16	2	11	7
16	15	0	10	5
17	15	0	11	4

Part II: Placental Localization

Localization of the placenta by ultrasonic sensor is less accurate than radioisotope methods but is sufficiently accurate to be of value in clinical situations when more sophisticated methods are not available.

ALTHOUGH radioisotope placentography was first reported in 1950, it was not until 1957 when Weinberg[16] and his colleagues using a more satisfactory radiopharmaceutical, I 131, labeled human serum albumin, that the method gained clinical acceptance.

Table II summarizes recently reported results using radioactive isotopes for localization of the placenta.

Seventy-six patients were included in this portion of the study to determine the effectiveness of the ultrasonic sensor in placental localization. In selected cases the results were compared with radioisotope placentography. The placenta was localized in one quadrant of the uterus. This localization was considered correct if the major portion of the placenta was in that quadrant of the uterus. The placental localization was confirmed at the time of delivery by manual exploration of the uterus or visual localization at the time of Cesarean section.

Results

In 76 cases in which the ultrasonic sensor was used to locate the placental site, 81% were correctly localized. When the placenta was considered to be in the upper or lower uterine segment validity increased to 95%.

Table II

Author	Date	No. of Cases	% of Correct Localizations	Method of Check
Largos et al	1965 [9]	116	84%	C-Section and Manual removal
Mantalenakis	1965[11]	80	95%	Not known
Munday	1966[12]	36	83%	C-Section (31) Manual (5)
Johnson et al	1966 [6]	86	96%	C-Section (57) Manual removal (16) Hysterotomy (4)

Table III

Placental Localization (Total)	Correct Localization	% age Correct
Ultrasonic Sensor (76)	62	81%
RISA (32)	28	90%

Thirty-eight of the patients in the study were admitted to the hospital with the diagnosis of third trimester bleeding. The ultrasonic sensor correctly localized the placental site in 28 of 38 cases, (74%). One case incorrectly localized was a complete placenta previa and one a low-lying placenta.

Thirty-two patients in this portion of the study had radioisotope localization of the placenta. The placental scan correctly localized the placenta in the correct quadrant of the uterus in 28 of 32 cases, (90%). The scan was able to localize the placenta as to fundus or low-lying placenta in 19 of 20 cases, (95%).

Table IV

3rd Trimester Bleeder (Total)	Correct Localization	% age Correct
Ultrasonic Sensor (38)	28	74%
RISA (32)	28	90%

In 12 of the patients the placental site was confirmed at Cesarean section. Eleven of 12 were correctly localized with the ultrasonic sensor, and six of six were correctly localized by placental scan.

Comment

This study demonstrates that the placenta can be accurately located using radioisotopes. The major difficulty is the need for special scanning equipment which is not always available. Trained personnel are necessary to operate the equipment and interpret the results. Another disadvantage is that the patient must be given iodine one hour before the injection of the radioactive material to prevent fetal and maternal thyroid uptake of I 131.

The ultrasonic sensor proved useful for placental localization due to its portability, availability and accuracy. Our results for placental localization with the ultrasonic sensor were not as accurate as the radioactive scan in most situations. In our opinion radioisotope methods remain the most reliable method for placental localization. The ultrasonic sensor may be useful if the scan is not readily available.

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Retroperitoneal Hemorrhage Secondary to Anticoagulant Therapy†

Allen R. Sklerov, M.D. and A. A. Hellebusch, M.D.

Lexington, Kentucky

A case of massive spontaneous retroperitoneal hemorrhage with anuria in a hospitalized patient on anticoagulant therapy is described. A review of the urologic literature on complications of anticoagulant therapy is included.

SINCE their introduction to clinical use, heparin (1937) and coumadin (1941) have been used by millions of patients. Though generally considered safe, hemorrhagic complications can be observed even under the best of circumstances. Only a thorough awareness of their complications will enable physicians to administer and monitor anticoagulant therapy properly.

Herein is described a hospitalized patient on anticoagulant therapy who developed retroperitoneal hemorrhage, rapid hypovolemia, shock and anuria due to acute tubular necrosis.

Case Report

L.F.P., a 75-year-old white male had internal nail fixation of a right intertrochanteric fracture on the second hospital day. There was no past history of bleeding problems and laboratory values were normal. By the second postoperative day, symptoms and EKG evidence of pulmonary embolus developed. He was transferred from orthopedics to the medical service after serum enzymes, blood gases, chest x-rays and lung scans were found to be compatible with recurrent multiple pulmonary emboli.

On the seventh postoperative day, heparin and coumadin therapy was started. Two days later the heparin was stopped and prothrombin time, despite the administration of clinical doses, was noted to be four times the control value. Coumadin was curtailed and given only when prothrombin time was twice the control or less. By the 10th day of therapy, a single episode of gross hematuria was noted. Coumadin was stopped, vitamin K administered, but heparinization was restarted five days later because of evidence of recurrent embolic disease.

After 10 days of heparin with activated clotting time in the clinical range, the patient complained of left-sided lower abdominal pain. The area was noted to be hard to palpation and heparin was discontinued. The next morning the patient suddenly developed shock with anuria and ileus. Hemorrhage was suspected, a drop in the hematocrit noted, and four units of blood were given to stabilize vital signs. Approximately six hours of hypotension were recorded during blood replacement. An additional four units were given over the next eight days.

Flatplate of the abdomen revealed a pelvic density and bowel ileus. Cystogram simultaneously illustrated the typical "teardrop" deformity of perivesical hematoma (FIG. 1). Drip infusion pyelography failed to demonstrate either renal system and retrograde pyelograms were done (FIG. 2). On bilateral catheterization, no urine returned and no ureteral obstruction was noted. The kidneys appeared to be shrunken indicating chronic intrinsic renal disease.

Hematoma progressed for two days with extension to the anterior abdominal wall and both thighs. Watchful waiting was carried out under urological observation and diuresis commenced four days after the onset of anuria. The BUN which had risen to 83 mgs % and serum creatinine to 5.3 mgs % subsequently returned to normal. Complete resolution of the hematoma occurred and the patient is convalescing in a nursing home.

Discussion

Urologic complications of anticoagulant therapy are best appreciated when discussed under

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FIG. 1 Cystogram illustrating "teardrop" bladder secondary to perivesical hematoma. Associated ileus is seen.

three categories: intraluminal, intrarenal and retroperitoneal bleeding.

Intraluminal bleeding: hematuria, the most common complication, is usually benign. Cessation of therapy and administration of neutralizing agents is usually all that is necessary. Occasional colic is noted as small clots pass through the ureter and some have to be removed by retrograde catheterization. However, it has become more evident that urologic evaluation should be done in all cases to ascertain if bleeding is merely incidental to the drug or if the drug has initiated bleeding from a silent source.

Antolak and Mellinger[1] reported 13 of 16 patients (82%) fully evaluated for hematuria developing while on anticoagulant therapy had some kind of urologic abnormality. Most had prothrombin times in the clinical range. Indeed, there is often noted a lack of correlation between bleeding and apparently well controlled prothrombin time. Occult tumors discovered incident to such hematuria were thought to be rare[2]. However, a questionnaire survey of internists and cardiologists conducted by Nathan and Kimball in 1965[3], revealed that 191 cases of occult malignancy including 71 in the GU tract were discovered when clinical evaluation was carried out. There were 47 bladder and 24 kidney neoplasms confirmed by surgical intervention. Had our case been evaluated following hematuria, bilateral renal disease and prostatism would have been discovered.

Intrarenal bleeding: Kaufman and McLellan[4] first brought attention to the occurrence of hematuria, flank pain and the demonstration of a mass lesion or "pseudotumor" of the renal parenchyma in patients on anticoagulant therapy. One case of a lower pole mass returned to normal in five months and a smaller one almost disappeared after 10 days. One "pseudotumor" reported by Sukthomya and Levin[5] turned out to be a peripelvic hematoma on exploration and an upper pole mass was followed for 10 weeks with return to normal pyelographic appearance. Klinger, et al[6] take a different view. In their two cases of "pseudotumor," nephrectomy was done because watchful waiting with the chance of delay in removing a possible renal tumor was felt to be too risky. Furthermore, they pointed out, exploratory nephrotomy in such patients could prove too hazardous. Hibner[7] reported a dramatic case of kidney rupture due to parenchymal



FIG. 2 Retrograde pyelogram shows shrunken kidneys, tortuous ureters due to bladder displacement and absence of ureteral obstruction.

bleeding. Nephrectomy was necessary because of near fatal hemorrhage.

Retroperitoneal bleeding: retroperitoneal hemorrhage should be suspected in a patient on anticoagulant therapy who has evidence of blood loss without an obvious source. The retroperitoneum can be a huge reservoir of potential blood loss. Our case alone required eight units to establish a near normal blood count. Pain in the flank, back or groin area, a palpable mass, changes in vital signs and diminished urinary output secondary to blood loss are the usual clinical features. Anuria due to hypotension superimposed on already diseased kidneys was seen in our case. "Anticoagulant ileus", the term first applied by Hafner[8], can readily occur with retroperitoneal bleeding. Almost two weeks of nasogastric suction was required for our patient's persistent ileus. Often a mass in the pelvis or obliteration of the kidney or psoas shadows is seen on plain x-ray. Cystogram is recommended and may show the "teardrop" deformity of perivesical hematoma. Intravenous or retrograde pyelogram may reveal deviation or distortion of the kidney and ureter.

Conservative management consisting of blood replacement, bed rest and neutralizing agents is generally advocated[4, 9, 10]. In a number of instances, however, immediate or delayed intervention may be necessary. Drainage of a large hematoma because of temperature and rising BUN was done by Hodin and Dass[10] early in a patient's course. Though bilateral ureteral obstruction is rare, Kaden and Friedman[11] observed this in a patient with intermittent anuria and normal urine osmolality. Ureteral catheterization resulted in an uneventful recovery. Klingensmith[12], reviewing the surgical implications of anticoagulant therapy included a case of his own that had acute urinary retention secondary to a huge perivesical hematoma. This resulted after vigorous prostatic massage in a patient on anticoagulant therapy and necessitated evacuation.

Though late complications are rare, Kaufman[4] drained the retroperitoneum one month after nephropexy and anticoagulation in a patient who showed progressing hydronephrosis due to ureteral compression. Cerny and Scott[13] debated the problem of idiopathic retroperitoneal fibrosis and presented seven cases where an associated etiology was present. Bilateral hydroureter and hydronephrosis in one young man with fibrosis around the lower ureters and bladder occurred four years after trauma and hematoma to that area. It is conceivable that delayed complications of retroperitoneal hemorrhage from anticoagulant therapy could be expected to appear.

Transvenous insertion of an intracaval umbrella in elderly patients with hip fracture or those coming to delayed pinning has been used preoperatively by Mobin-Uddin[14]. Certainly, patients on anticoagulant therapy who continue to embolize should be subjected to caval interruption. In retrospect, this therapy should have been utilized in the case reported above.

Conclusions

1) Bleeding occurs in patients on anticoagulant therapy even though laboratory testing indicates satisfactory levels.

2) Hematuria developing on anticoagulant therapy should be fully investigated. Urologic disease including occult tumors will be discovered in a significant number of cases.

3) "Pseudotumor" can result from intrarenal bleeding and nephrectomy may be necessary in some.

4) Retroperitoneal hemorrhage should be considered when bleeding is suspected but no source is obvious.

5) Though conservative measures usually suffice, immediate or delayed intervention may be necessary.

6) It is conceivable that late fibrosis can result from retroperitoneal hemorrhage in patients on anticoagulant therapy.

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(References Continued on Page 651)

Occupational Health In Kentucky (A Status Report)

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The status of occupational health in Kentucky as determined from the National Surveillance Network of the National Institute for Occupational Safety and Health is reviewed.

THE Occupational Health Program, Kentucky Department of Health in cooperation with the National Institute for Occupational Safety and Health (NIOSH) has recently collected data concerning the work environment in Kentucky.

The National Surveillance Network (NSN) reporting system and statistical design was used. A random selection of plants was made following stratification of the plant population according to type and employment size. Each sample plant was inspected by an industrial hygienist and an NSN form completed. The results of these inspections were processed and tabulated by NIOSH.

The statistical design and sampling method was such as to allow for certain projections to the overall industrial population within the State. The limitations associated with any statistical projection from a sample population to the general population most certainly apply here, however, it is felt that despite these limitations these projections represent a reasonable assessment of Occupational Health in Kentucky.

As of June, 1971, there were 22,421 plants with four or more employees representing a working population of 531,435 men and women in the Commonwealth[1]. This does not include mining, government, construction, finance or agriculture.

Perhaps the best way to view the results of this survey is to look at it in light of the overall objectives of an Occupational Health Program.

The placement of the job applicant and the current employee in work commensurate with his physical and emotional capacities, and which he can perform without danger to himself or his fellow workers and without damage to property is one of the objectives of any occupational health program[2]. Yet two-thirds of Kentucky industries do not require a preplacement medical examination[3], and only half take a medical history[3]. Job transfer medical examinations are almost unknown[3].

Another objective is to provide emergency medical care for the occupationally and nonoccupationally ill or injured[4]. Over one-third (36%) of Kentucky industries are without the services of a physician or a nurse[3]. Over 40% have no physician care available either full-time, part-time or on call[3]. Less than 10% have available nursing care[3].

Physician coverage for the most part is on an on-call basis. With only rare exceptions these on-call physicians never visit the plant[3]. Most of these "company doctors" have never been in the plants they service even though many have been with companies for many years. Formal training in occupational medicine is almost nil[5].

The maintenance of the health of the worker through promotional activities, specific preventive medical procedures and frequent reviews of his health status is an equally important objective of an on-going occupational health program[4]. Twenty percent of Kentucky industries give chest x-rays where appropriate[3]. Fourteen percent give blood and urine tests where indicated[3]. Less than 4% give audiometric exams to employees exposed to excessive noise levels. Lung function tests and other physiological tests are almost unheard of in Kentucky industry[3].

Still another objective is to protect the worker from and control potential health hazards[4]. According to the survey the most frequently

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encountered health hazards in Kentucky industries are noise, dust, carbon monoxide and extremes of temperature, in that order[3]. Note that even though noise is the number one hazard only 4% of Kentucky industries give hearing tests. Only 28% of all plants give periodic medical exams to employees in hazardous jobs[3]. Nearly 90% of Kentucky industries are without the services of an industrial hygienist[3]. Many industries did not know what an industrial hygienist was.

All in all the occupational health picture in Kentucky industries is not good. This is not to condemn all Kentucky industries for some have excellent programs, programs that could hold their own alongside any in the nation. But far too many Kentucky industries, especially the smaller companies (less than 100 employees), still have a long way to go.

On-call physicians and their management must start talking to each other on occasions other than the injury of an employee. A simple walk-through tour of the plant may be beneficial to both the physician and management. The emphasis must be shifted away from the idea of acute care to the idea of preventive medicine. The new Federal Occupational Safety and Health Act (PL 91-596) may be just the push needed to bring this about.

Organized medicine must exercise leadership in providing adequate occupational health services to all Kentucky workers, including those in small plants. The medical profession has a responsibility to educate industrial management and labor to the values of such services.

The responsibility for occupational medical services should not be viewed as being limited to full-time, salaried physicians in industry. Physicians in private practice in rendering part-time or consultant services to industry can play an important role in improving occupational health services. It is in the provision of these services to small plants that physicians in private practice can make their greatest contribution and as the survey indicates this is the area of greatest need.

There is a definite need for better occupational health programs in Kentucky industries and as management and labor become more aware of this need they will require direction as to how to fill it. Organized medicine and the private physician must be ready to provide this direction or it will be provided by others outside the medical profession.

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Medical Progress

Management of Abnormal Vaginal Bleeding†

Emery A. Wilson, M.D. and John W. Greene, Jr., M.D.

ABNORMAL vaginal bleeding is common and may be caused by factors constituting a sizable problem to the practitioner. Normal menses is considered as cyclic bleeding with not less than 21 days between the dates of onset with a duration of flow of not more than eight days. Fifty to 75 cc of tissue is sloughed during each menses. The pattern of bleeding will vary but each patient's pattern of menses is remarkably constant. Should this relatively constant pattern change, it must be considered abnormal for that patient. In association with a normal pattern, staining may occur between menses at the presumed time of ovulation. This is probably due to a temporary fall in hormonal levels. Abnormal uterine bleeding, dysfunctional uterine bleeding, menorrhagia and metrorrhagia all are defined as bleeding in the absence of neoplasia, infection or accidents of pregnancy.

Patients with abnormal vaginal bleeding may be divided into three age groups: the adolescent years, the reproductive years and the postmenopausal years. In each group, organic causes of bleeding must be investigated by appropriate diagnostic methods before the bleeding can be considered abnormal.

The Adolescent Years

Precocious puberty is defined as the onset of menses prior to nine years of age. Secondary sex characteristics are developing. Precocious puberty is constitutional in 90% of cases. However, this is a diagnosis of exclusion. Exogenous estrogens, estrogen-producing tumors, central nervous system neoplasias and foreign bodies in the vagina can be etiologic factors. Rectal examination can usually be performed without discomfort to assure the absence of pelvic pathology. Examination under anesthesia must be performed when the office examination is inadequate.

Foreign bodies and exogenous estrogens constitute the most common causes of vaginal bleeding in children. An abdominal x-ray will frequently reveal a foreign object in the vagina. General anesthesia may be necessary to remove the object and to repair any lacerations incurred.

Immediate post menarchal menstrual periods tend to be anovulatory and may remain so for months or years. This lack of regular ovulation resulting in inadequate progesterone production and thus the improperly developed endometrium is the causative factor in the majority of menstrual irregularities in the adolescent. The diagnosis of such abnormal bleeding can be assumed in young girls with irregular or prolonged vaginal bleeding and in most instances without the aid of endometrial curettage or biopsy. In considering the menstrual disorders producing abnormal bleeding in teenagers, a general outline for management is as follows: thorough physical examination and pelvic examination is essential, even if only a rectal abdominal examination is possible. One must be alert for the possibility of pregnancy or pelvic tumor when such abnormal bleeding is encountered.

Malignancies of the genital tract are indeed rare in the young and frequently are accompanied by irregular vaginal uterine bleeding. An endometrial polyp or submucous myoma may also be an organic cause of such abnormal bleeding and may be missed at the

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time of diagnostic endometrial curettage. These conditions will become evident when other means of therapy are not curative.

One must remember the possibility of a young girl acquiring hormonal compounds such as contraceptive pills and taking them in an unsupervised fashion. In these instances she may develop periods of amenorrhea followed by abnormal vaginal staining or prolonged menstruation. Hypothyroidism and hyperthyroidism must enter into the differential diagnosis of such bleeding. Either of these forms of thyroid disease may be accompanied by profuse, prolonged bleeding.

Menstrual excesses and prolongation in adolescent females may have a blood dyscrasia as their primary cause. For this reason, blood studies must be performed on all young patients with prolonged uterine bleeding; however, it must not be assumed that a slight abnormality of coagulation is the causative factor, because patients on anticoagulant therapy may have normal menstrual function.

Occasionally the physician will encounter severe heavy vaginal bleeding in the young teenage girl. She will bleed so profusely that severe anemia and borderline shock occur. Bleeding will have been for a period of a week or two. The objectives of treatment are to abate the bleeding, restore blood volume and improve the adolescent's general health. In order to institute treatment the patient should be at bedrest, study of the peripheral blood is done and the degree of anemia is established. A normal differential, normal platelet count, clotting time and clot retraction will exclude 99% of the blood dyscrasias. After the initial blood study, blood volume and hematocrit are brought to normal by transfusion. Following transfusion, bleeding will frequently stop. Chronic anemia seems to prolong vaginal bleeding. When cessation of bleeding does not occur, and pelvic examination is normal, examination under anesthesia and curettage is in order. This examination followed by dilatation and curettage is both diagnostic and therapeutic. It should rule out pelvic pathology such as neoplasms, extensive congenital erosions and cervical or endometrial polyps, and will cure up to 80% of bleeding in these young women. In the majority of these patients the endometrium shows varying degrees of proliferation and hyperplasia, indicating immature and developing ovarian function. When the bleeding is brought under control by curettage, attention must be paid to the thyroid status, nutrition and consideration of cyclic therapy with estrogen and progesterone. The administration of an oral progestin during the second half of the menstrual cycle should regulate the flow until hypothalamic, pituitary and ovarian balance are achieved as maturity is approached. It is best to use a progestin during the latter part of the cycle (i.e., day 18 to 25) rather than continuous suppression with an estrogen or progestin throughout the month. Repeated episodes of heavy bleeding may be encountered which necessitate curettage even to the point of five or six times over a period of several years. However, six or eight curettages in a young girl are certainly indicated rather than hysterectomy or radiation of the ovary.

The use of conjugated equine estrogens (Premarin) has been advocated to control episodes of heavy bleeding. Ten mg intravenously repeated in six to 12 hours followed by the administration of 1.25 mg by mouth four times a day is given for a period of 20 days. It is essential then to follow the estrogen by the administration of an oral progestin such as medroxy-progesterone acetate 10 mg twice a day for five days to produce a secretory endometrium, and this should result in a normal flow. Many instances of estrogen administration alone without the addition of progesterone are seen. The sole treatment with estrogen results in an endometrial hyperplasia which results in excessive bleeding.

Reproductive Years

Pregnancy complications are the most common cause of vaginal bleeding in the reproductive years. Accidents of pregnancy must be considered, therefore, in any patient with abnormal bleeding in this age group. Spontaneous abortions, ectopic pregnancy and hydatidiform mole are the frequent causes of bleeding in the first half of pregnancy. Any bleeding which occurs after 28 weeks gestation constitutes "third trimester bleeding" which includes placenta previa and abruptio placenta which must then be diagnosed and properly treated.

Cervical carcinoma occurs in approximately

one in 200 pregnancies at the University of Kentucky Medical Center and can be a source of vaginal bleeding. A common misconception has been that cervical cytology cannot be performed during pregnancy or menses. On the contrary, Pap smears should be performed in all pregnant women and a well-trained cytopathologist has no difficulty interpreting them. A normal pelvic cytologic examination performed early in pregnancy removes cervical carcinoma as a possible cause of third trimester bleeding later in pregnancy.

There are many other causes of bleeding in the reproductive years. Bleeding may be of cervical origin—inflammation, erosion and polyps. This is usually manifested by "contact" bleeding following coitus or douching. Treatment consists of vaginal antibiotics, cauterization or cryotherapy but only after tissue examination excludes malignancy. Menorrhagia, represented by either increased or prolonged flow, is frequently found in patients with advancing age, uterine leiomyomata or subinvolution of the uterus. Uterine curettage can be both diagnostic and therapeutic in most cases. Persistent menorrhagia following curettage may be treated with oral progestins if there is no intra-uterine pathology. Other causes of menorrhagia are luteal phase defects with irregular shedding of the endometrium and persistent anovulatory bleeding.

When the diagnosis has been established by examination and/or curettage and the bleeding still persists, the use of an estrogen, progestin, either cyclic or in combination, is indicated. As in the teenage girl, massive doses of estrogen such as the intravenous injection of 10 mg of conjugated estrogen will arrest episodes of heavy vaginal bleeding. This administration of the intravenous preparation along with the oral **must** again be followed by administration of a progestin to effect withdrawal bleeding that usually is not heavy. The principle of the estrogen and progestin therapy is to render the endometrium in a secretory phase, thus making it capable of orderly exfoliation when the steroids are withdrawn.

There are various methods of administering a progestin alone to control abnormal uterine bleeding and to regulate the menstrual cycle. Methods chosen by the practitioner are influenced by convenience as well as the psychology of the patient. Progestins are very effective and have a wide margin of safety. There are practically no side effects to the administration of the synthetic progestins, and for this reason the dosage can be large and thus effective. These compounds are most often prescribed as a tablet containing a small quantity of an estrogen such as ethinyl estradiol or mestranol. The slight amount of estrogen enhances the uterine bleeding-arresting qualities of the progestin. This combination tablet can be given for 20 days each month and is very effective in controlling dysfunctional uterine bleeding. If such bleeding is not controlled by the proper administration of such hormonal therapy, other organic causes for such bleeding must be searched for thoroughly.

As the patient approaches menopause, ovarian function is waning and anovulatory cycles become frequent. This usually results in progressive decrease in menstrual flow and oligomenorrhea with subsequent termination of menses. Contrary to popular belief, intermenstrual bleeding is not normal in the perimenopausal syndrome.

Estrogen activity can be evaluated by obtaining a smear from the lateral vaginal wall to determine the ratio of parabasal/intermediate/superficial cells present (maturation index). A shift to the right (predominantly superficial cells) indicates adequate estrogen support whereas a left shift indicates estrogen lack. **This must be related to the menstrual cycle, however, as the estrogen level is increased at the time of ovulation and is lowest immediately following menses.** Any woman having cyclic vaginal bleeding does not need exogenous hormones. In these patients, the exogenous hormones may induce abnormal bleeding.

The abnormal uterine bleeding of the later reproductive age must be diagnosed by dilatation and curettage, for the incidence of malignancy is great. When such bleeding recurs after one or possibly two curettages, total hysterectomy by the vaginal or abdominal route is usually advocated. Of course, in all incidences of abnormal uterine bleeding careful attention must be devoted to the general health and nutrition of the patient.

Androgens have been used in the treatment of premenopausal dysfunctional bleeding. It is

to be greatly emphasized that such endocrine therapy for the control of such bleeding is fraught with the possibility of delay in diagnosis of other disease unless dilatation and curettage is first done. Also, the danger of masculinization is ever present. Israel[2] has recommended androgen therapy in dysfunctional premenopausal uterine bleeding. The physiologic effect of this depends upon the ability of the androgen to reduce bleeding through its direct action upon the endometrial vascular tree. Its influence on such bleeding is temporary but frequently can be employed to permit spontaneous remission to occur. Israel[2] prefers the oral administration of methyltestosterone in a 10 mg tablet daily for 15 days alternated with a 10 day rest period. This should not evoke even a temporary masculinizing manifestation.

Radiation therapy for menopausal dysfunctional bleeding has been relegated to the rare instance of the high-risk patient who should not be subjected to a major operative procedure such as hysterectomy; of course, such x-ray treatment must be preceded by an accurate diagnosis. This method of treatment should be reserved for those patients with severe systemic disease in such an advanced state that even the administration of spinal or general anesthesia would be a greater risk than the application of external radiation. One must appreciate that in such patients there is a risk of radiation-induced cystitis and possibly bowel complications. With the proper employment of a low dose these effects should be minimal.

Postmenopausal Years

Any vaginal bleeding which occurs one year following cessation of menses is defined as postmenopausal bleeding. Bleeding less than one year may be attributed to the oligomenorrhea of the perimenopausal syndrome. Although the average age for the climacteric and menopause is 48 years, there are patients who continue to have normal menses well into the sixth decade. An endometrial biopsy performed after the 23rd day of the cycle will frequently reveal secretory endometrium and confirm continued ovulation as the cause of menses.

Although the most common cause of postmenopausal bleeding is exogenous estrogens, malignancy must always be suspected. Practically all gynecologic tumors are more common in this age group. If the patient is taking estrogens cyclically, she may be allowed to have withdrawal bleeding but only during that time she is not taking estrogens. Any other vaginal bleeding must be investigated by diagnostic dilatation and curettage. In the bleeding patients not taking exogenous estrogens, dilatation and curettage is mandatory before any treatment is instituted.

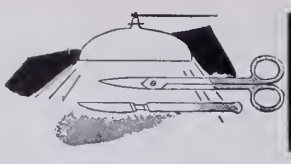
Atrophic vulvitis and vaginitis is also a common cause of postmenopausal bleeding. However, as in the premenopausal women, this cannot be assumed to be the obvious cause. The physician must be certain that there is no co-existent malignancy. Until this is done, one should not proceed with hormone therapy. A cytologic examination and endometrial biopsy with a Novak[3] curette in the office can, when positive for malignancy, save the patient from hospitalization for dilatation and curettage. Should the patient not tolerate a uterine sound or biopsy, a curettage under anesthesia must be performed.

Summary

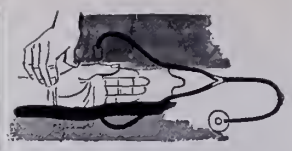
Abnormal vaginal bleeding is a symptom, not a diagnosis. Failure to perform a pelvic examination and empiric hormonal therapy is to be condemned. A diagnosis must be obtained in these patients regardless of age before instituting hormonal therapy. The common causes of abnormal vaginal bleeding and the diagnostic methods with therapeutic suggestions have been presented.

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GRAND ROUNDS



The University of Louisville School of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

An Objective Basis For Aortocoronary Saphenous Vein Bypass Myocardial Revascularization

THE ability to treat large numbers of patients with occlusive disease of the coronary arteries and obtain excellent results plus a low mortality rate is one of the most important surgical advances in recent years. In the field of cardiovascular surgery, the technique utilizing aortocoronary artery saphenous vein bypass grafts has been the advance with the broadest application to the patient population in general.

The tecnhiques involved in aortocoronary artery saphenous vein bypass operations are the result of a number of separate techniques for operations on the coronary as well as other peripheral arteries developed principally over the past 15-20 years[1, 2, 3]. Coronary artery endarterectomy followed by vein patch grafts, short segment vein bypass and interposition, initially only on the right coronary artery, led logically to today's aortocoronary artery bypass. As time and experience accumulated, it became apparent that this was a relatively simple straightforward procedure and the bypass operation was extended successfully to the left anterior descending coronary artery (LAD) and to branches of the left circumflex coronary artery. The operation has wide applicability and the results have been outstanding with the mortality rate overall considerably less than 10% and actually in the neighborhood of 4 to 5%.

Although this has been a momentous step forward with marked subjective improvement of the patients, objective data with which to substantiate the value of this type of treatment is scarce. The patients are relieved of their anginal pain, one of the most striking aspects, and most are able to return to a productive life pain-free with improved myocardial function. However, little objective data is available actually demonstrating improved function of the heart as a pump, decreased incidence of myocardial infarction or increased life expectancy after aortocoronary artery bypass operations.

Recently, 70 patients operated upon at the University of Florida Teaching Hospital from February of 1970 to November of 1971 and restudied in the first one to three weeks following surgery were reviewed[4]. Twenty of these patients were selected for detailed analysis because they had technically adequate pre-and postoperative cine left ventriculograms. This study has provided preliminary, but definite, data demonstrating the improved function of the heart as a pump within one to three weeks following saphenous vein aortocoronary bypass surgery.

The following case report, illustrating one of the types of patients reviewed, is an excellent example of the applicability of these techniques and the type of result which one can anticipate in patients significantly incapacitated as a result of atherosclerotic coronary artery heart disease.

Case Report

Patient E. R. is a 41-year-old black female, who was in excellent health until September of 1971, approximately nine months prior to surgery, when she developed typical angina

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pectoris over a 10- to 12-day period. She was hospitalized and had sustained an extensive anterolateral wall myocardial infarction which was complicated by congestive heart failure. The patient was discharged three weeks later relatively stabilized on digitalis and diuretics. In spite of intensive drug therapy she continued to have significant dyspnea on exertion which limited her to minimal household activities. During the ensuing six months she experienced at least three episodes of angina pectoris. The patient smoked one pack of cigarettes per day.

Physical Examination

B.P. 100/70 mm. Hg. P 70, R 20, T 38°C. At the time of admission to the Louisville General Hospital (6-8-72), the patient presented as a thin, well-developed, reasonably healthy appearing, 41-year-old black female in no acute distress. There was elevation of the jugular venous pulse but no peripheral edema and the lungs were clear to percussion and auscultation. Examination of the heart revealed a diffuse, widely palpable, rippling-type of left ventricular impulse suggestive of a left ventricular aneurysm. S-1 was soft; S-2 was normal; there were loud S-3 and S-4 gallops present at the apex. There were no murmurs and no rubs or thrills. Peripheral pulses were intact and equal.

Pertinent Laboratory Data

Electrocardiogram showed a normal sinus rhythm and the absence of anterior forces indicating an extensive old anterior wall myocardial infarction. The chest roentgenograms showed borderline cardiomegaly with a left ventricular configuration and no evidence of pulmonary congestion. Pulmonary function studies were within normal limits.

Cardiac catheterization had been performed on 3-15-72. The resting aortic and left ventricular systolic pressures were normal with no evidence of aortic stenosis or insufficiency. There was marked elevation of the left ventricular end-diastolic pressure to 30 mm Hg indicating severe left ventricular dysfunction. Cineangiography showed a dominant right coronary artery with diffuse luminal irregularities with a short segmental narrowing of approximately 2 cms in length involving the mid-portion of the right coronary artery which resulted in greater than 80% narrowing of this vessel at that point. There was distal filling of the right coronary artery which was slightly narrowed but had no further areas of greater than 50% narrowing visible on the arteriogram. Numerous collateral vessels were seen to arise from the proximal portion of the right coronary artery which filled faintly the mid and proximal portions of the left anterior descending vessel. Injection in the left coronary artery showed a normal left main coronary artery. There was total occlusion of the left anterior descending coronary artery at its origin and no significant antegrade filling of this vessel from injection on the left. The left circumflex artery and the left marginal arteries were somewhat smaller than usual and revealed diffuse luminal irregularities but no areas of greater than 50% narrowing.

Injection into the left ventricle showed moderate enlargement of the overall left ventricular cavity in size and a very large akinetic segment involving the distal 60 to 70% of the anterolateral portion of the left ventricular wall. There was no true systolic bulging in this region and no diffuse luminal irregularities to suggest mural thrombus. There was no calcification and there was no mitral regurgitation suggesting that the papillary muscles had not been involved in the infarct and were functioning in an intact fashion. The more basal portions of the left ventricle appeared to contract reasonably well.

In view of the patient's age and severe disability, it was believed that the patient was a candidate for revascularization surgery with appropriate treatment of the akinetic area of the left ventricle.

On 6-14-72 the patient was taken to the operating room where the left ventricle was incised in the midportion of the akinetic area. The extensive left ventricular wall infarction which had destroyed the left ventricular muscle leaving a thin fibrotic area covering about 6 by 8 cm in overall dimensions was lined with a layer of 2 to 3 mm of soft red blood clot. The infarcted area extended within a centimeter or so of the bases of the papillary muscles but did not involve the papillary muscles. The mitral valve appeared normal. The clot was carefully removed from the endocardium and

the left side of the heart thoroughly irrigated. The akinetic aneurysmal portion of the left ventricle was then excluded and the suture line closed.

Next, endarterectomy of the distal right coronary artery just proximal to the origin of the posterior descending branch was carried out. After successful endarterectomy, a reversed saphenous vein bypass graft from the ascending aorta to the distal right coronary artery was inserted with good flow into the distal right coronary artery.

Following surgery the patient required a tracheostomy for excessive secretions and a brief xylocaine drip for ventricular extrasystoles. Essentially, however, the postoperative course was uneventful and the patient was discharged much improved.

Table I

Left Ventricular Volumetrics
Mean Normal Values

End-systolic volume	=	16 cc/m^2
End-diastolic volume	=	81 cc/m^2
Stroke volume	=	65 cc/m^2
Ejection fraction	=	80%

Stroke volume: end-diastolic volume—end-systolic volume
Ejection fraction: stroke volume ÷ end-diastolic volume

Discussion

The purpose of our study was to observe and quantitate the effects of aortocoronary saphenous vein bypass grafts on left ventricular function as reflected by the cine left ventriculogram in the early postoperative period (6 to 20 days). The patient presented here is representative of those patients in general who have sustained a previous myocardial infarction which results in areas of akinesis or frank aneurysm. Many of these patients will also require bypass grafts to one or two of the remaining main coronary arteries. A common combination in our experience is further illustrated by this patient—excision or plication of the anterolateral wall of the left ventricle plus saphenous vein bypass graft to the distal right coronary artery.

In the group of 20 patients reviewed, there were two patients similar to the case reported here. Both patients had severely reduced preoperative ejection fractions—17%, 11%. Following surgery, consisting of plication of a ventricular aneurysm and a saphenous vein bypass graft, they both improved dramatically (Tables I and II).

Comparative pre- and postoperative analysis of percent change in area of each half of the ventricular outline from diastole to systole was calculated. The inferobasillar portion of the left ventricle responded with increased motion in 7 of 13 grafts to a dominant right coronary artery. On the other hand, only 3 of 13 LAD grafts induced increased contraction in the anterolateral region of the left ventricle. Lack of improvement in most of the anterolateral areas of the left ventricle after LAD bypass is intriguing. This lack of early improvement may be a part of the apical venting residua or due possibly to an unknown characteristic of the hypokinetic anterolateral wall.

Most encouraging was the fact that 19 of 20 patients either retained or increased their preoperative ejection fraction in the immediate postoperative period. It was also shown that many areas of revascularized myocardium had increased contractility. These findings become more impressive when compared with the findings that 72% of areas supplied by significantly diseased but non-grafted vessels showed decreased contractility following operation.

IMITAZ AHMAD, M.D.
MYRON W. WHEAT, JR., M.D.

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Table II
PATIENT DATA

	Preoperative		Postoperative		Changes	
	E.F.	S.V.	E.F.	S.V.	E.F.	S.V.
Case 1.	17%	28	48%	64	+31	+36
Case 2.	11%	18	32%	31	+21	+13

SPECIAL ARTICLES

Heat Illness in Early Season Football Practice

Robert N. McLeod, M.D.*

FORTY-SIX American football players, mostly high school students, have died from "heat stroke" in the past 10 years. This ranks as the second largest cause of death from football injuries, second only to injuries of the head.

In view of recent evidence, these deaths must be considered totally preventable. Most of them have occurred during the first two or three days of early football practice and most have occurred to interior linemen; i.e., those people who show a great weight loss each day during early practice.

On the basis of work done in the Armed Services during the past few years and on the basis of recent information from the AMA Committee on Medical Aspects of Sports, your KMA School Health Committee has attempted to get information to the high school football coaches of Kentucky on simple measures to prevent heat illness. A Seminar on Sports Medicine was held at Eastern Kentucky University in May. An article on "Heat Illness in Early Season Football" will be published in the August issue of the "High School Athlete," the journal of the Kentucky High School Athletic Association. The KMA Committee participated in the annual football coaching clinic at the University of Kentucky on August 4 to stress prevention of heat illness.

Since many of you work as team physicians, the Committee felt that you would like to have a summary of prevention measures and particularly information on how to use a sling psychrometer to determine the wet bulb temperature and what precautions should be taken on the practice field.

*Somerset, Kentucky. Chairman, KMA Committee on School Health, Physical Education and Medical Aspects of Sports.

Table I

Wet Bulb Temperature	Field Precautions
Under 60°F	No precautions necessary
61-66°F	Watch all squad members especially those who lose a lot of weight (interior linemen)
67-72°F	Water must be given on field at 10-15 minute intervals
73-77°F	Alter practice schedule to a lighter routine. Observe all above precautions.
78°F or higher	Practice postponed, or conducted in shorts for only a short time.

Prevention of Heat Illness In Early Season Practice

1. Acclimatize your players both to heat and exercise. Do this for several weeks prior to the beginning of your regular practice.

2. Condition them to practice for at least three weeks prior to the beginning of "full" practice. They should begin with 20-30 minutes, and gradually increase this before putting on pads.

3. Clothe them properly. Be certain that the clothing is loose, lightweight, preferably "net" with short sleeves.

4. Provide fluids **before** practice, **during** practice, **after** practice—as much as they will drink. This can be cold, even ice. I know that this is contrary to everything that all of us have been taught, but this is certainly the most significant thing that we in sports medicine have learned in the last 10 years.

5. Weigh players before and after practice. Encourage fluids to those who lose much weight.

6. The coaching staff must cooperate with the team physician. They must give full support to the entire program. The basis of this

program should be the daily use (especially in August and September) of a "sling psychrometer" to determine the wet bulb temperature reading and what precautions should be taken during practice. A student manager can easily be taught to make the determination in two to three minutes. The wet bulb temperatures and the precautions a coach should take during practice are given in Table I.

If you follow these simple precautions, you may prevent a catastrophe not only to your football team but to your school.

Let's Help Them Sooner

Icen E. Wilson*

APPLICANTS for disability benefits are waiting much too long to call the social security office to file their applications. Granted, there is a six month waiting period before benefits are paid and, in fact, this is all the more reason the patient should be directed to call the social security office and have his claim taken by phone in the first few weeks after his impairment begins.

Some of us may not remember that the definition of "disability" was changed some time back. Now all the doctor must do is show the clinical findings which prove his patient will be disabled for 12 months or more. If his patient is disabled for seven months and the doctor does not refer him to social security until he has been out of work for seven months, then you can bet the patient has been led to the brink of poverty or beyond.

The procedure is simple:

1. Refer your patient to social security the first weeks of his disability if your judgement tells you it will be 12 months or more before he can be expected to recover. Remember, in many cases the idea of having money coming to the family can be a great help in getting your patient's attitude improved and could possibly result in sooner recovery.

2. Tell your patient to call his social security office and get a scheduled appointment by telephone. We can do everything we need to do by telephone and then mail him the proper forms to sign. No long, nerve-wracking waits in a big office are necessary. If the patient is in a hospital, we can call him there or have some family member help us help him by phone.

3. Remember, since June, 1971, local social security offices have not been asking for medical records from you, except in rare instances. The requests for medical reports came from the State Agency making the determination for social security (only medically-trained State Agency people request this medical information). We know this has cut down on the number of requests you have received, thus letting you devote more time to patient hours.

4. One last reminder: many of your patients, 18 to 25, have disability protection. Don't overlook these people impaired by diseases of the young or who have impairments caused by accidents.

The social security disability program has worked because the medical profession made it work. About 2,700,000 disabled workers, their wives and children are receiving benefits under social security because you helped. Now, let's help them sooner!

*District Manager, Social Security Administration, U. S. Department of Health, Education and Welfare, Louisville

EDITORIALS

Kentucky

TRAVEL nowadays is easy, rapid, and educational, and a large part of its educational value lies in one of its by-products—an increased awareness of the value of our own homes. How often we have all felt an almost physical sense of relief and well-being sweep over us, on a return from a trip to some crowded, concrete, complex megalopolis, when we once again set foot in our cool green woods, our quiet suburbs, and our pleasantly progressive cities. Many men, in urban areas where a lot of money changes hands (much more than in our relatively impoverished state), work desperately hard all their productive lives to achieve what we have here almost without effort—a quality of life at once relaxed and meaningful, a life style where "achievement" is modified by honesty and humor, a perspective and pace governed by a real sense of caring for our fellow men.

Balance seems to be the keynote and keystone for this happy circumstance in which we find ourselves. Neither too far North nor South, we have a climate generally mild but changing enough to be interesting. Neither too industrialized nor too rural, we have a mix of both elements—industry for progress and the dollars to make the economy move, and fields and woods to make the people, who work in those industries, happy in their lot. For those who want symphony, opera, ballet, and theatre, these are alive and well in Kentucky. For those who hunt, fish, boat, fly, golf, and play tennis, these sports are available in lake, park, river, and club settings second to none. For those of us in the medical profession, we're blessed with two fine medical schools to produce us, nurture us, stimulate us, and improve us, as we wend our way through our careers.

Kentucky is a wonderful place to live, and to practice medicine. If some of you feel this is a bit smug and unrealistic—that there are many problems I've ignored—why, you just may be right! But then, you don't go into a rose garden to pick the thorns, do you?

WALTER I. HUME, JR., M.D.

An Awareness of Mycotic Diseases—Its Impact in a Single Hospital†

THE relatively low prevalence of correctly diagnosed mycotic diseases is basically attributed to several factors which include: (a) a lack of awareness that fungi can, and in fact, do infect large numbers of individuals; (b) failure to evaluate patients for mycotic infections in spite of the fact that the mycoses mimic many other serious infections; and (c) failure to either isolate or recognize the causative agent due to a false feeling of incompetence in mycology and a basic fear of the pathogenic fungi.

The truth is that mycotic diseases do indeed present a difficult diagnostic problem, however, it is not one which cannot be simplified. The awareness that fungi are a common cause of human disease is realized only by a select few, those who are looking specifically for these diseases or those who have made the diagnosis by looking in desperation for the

cause and incriminated the fungi as a last resort. In order to make this awareness available to every clinician all mycotic diseases should be reported and results made known by publications of case reports and by reports compiled by state health agencies.

However aware physicians may become, a diagnosis cannot be confirmed without the aid of the laboratory. Most hospitals do not perform mycological examinations either because they are not requested or because laboratory personnel still believe in an "old wives' tale" that mycology is too difficult to do and the fungi are too infectious to handle. Yet they are content to work with the mycobacteria which are equally infectious.

Most fungi seen in the routine laboratory are morphologically different and relatively easy to identify if the technologist is willing to have the patience to spend a little time looking for something which might be unfamiliar. This feeling of incompetence in mycology and basic fear of the pathogenic fungi can be eliminated after a few successful isolations are made which can help the physician to save a life. A problem which arises with the technologist is that in some instances he may not be able to identify the causative organism; in this case it should be stressed that there are reference laboratories which will gladly provide this service without charge. In short, mycological examinations are not so difficult that they cannot be performed routinely in any hospital laboratory. This can only be accomplished if physicians will use their awareness and request the laboratory to provide this necessary service.

A perfect example of this combination of awareness and laboratory service is exemplified by a trial study in a small hospital in northeastern Texas. A small group of physicians became interested in mycotic infections and the pathologists in the local hospital agreed to provide the necessary laboratory services.

Patients were screened carefully and specimens were submitted to the laboratory for mycological examination. A reference laboratory provided help and supplied the hospital with instructions for using three simple media useful for isolating virtually any pathogenic fungus. These included plates of plain Sabouraud's dextrose agar containing penicillin, Streptomycin and cycloheximide, and 10% blood agar containing the previously mentioned antibiotics.

Previously this hospital laboratory had been unsuccessful in the isolation of fungi but during the six months course of this study the following cases were clinically and mycologically diagnosed:

(a) Pulmonary cryptococcosis
(b) Invasive aspergillosis
(c) Disseminated histoplasmosis
(d) Cutaneous sporotrichosis
(e) Pulmonary nocardiosis
(f) Mycotic keratitis (fungal corneal ulcer)
(g) Articular disease of the knee due to *Cephalosporium species.*

The point is that if one small hospital laboratory and a small group of physicians can diagnose this many mycotic cases—then this should be an incentive for physicians and hospitals all over the country to strive to make this awareness and laboratory cooperation work for them. Report your cases and request help from the laboratory—in this way many lives can be saved.

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†*Written by Glenn D. Roberts, Ph.D., University of Kentucky College of Medicine, Lexington and Howard W. Larsh, Ph.D., University of Oklahoma, Norman, Oklahoma*

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If you've seen one, have you really seen them all?

The following patient profiles represent typical clinical situations, but do not necessarily represent actual cases.

Age 22, previously normal mens with occasional menorrhagia. N on a sequential O.C. for four mo Complains of heavy flow, occasional intracyclic bleeding, edema, tender swollen breasts.

Indicates estrogen excess.

1st choice: Switch to a combination 50-mcg.-estrogen O.C. (such as **Demulen***).

Age 19, small breasts, minor hirsutism, oily hair and skin. History of metrorrhagia, skipped or scanty menses. New user.

Indicates androgenic excess or estrogen deficiency (fertility is suspect).

1st choice: An estrogen-dominant O.C. (such as **Enovid-E***).

Age 25, average frame, poor complexion. No problem with menses, normal para 1. On a low-estrogen/high-progestogen O.C. for two years. Now complains of scanty flow, decreased libido, depression.

Indicates probable buildup of progestogen-related side effects.

1st choice: Switch to a center-spectrum O.C. with more estrogen, less progestational activity (such as **Ovulen***).

Age 21, short, mammose, with normal menses, some acne. Was put on prenuptial regimen of 50-mcg.-estrogen/moderate-progestogen O.C. for two months. Now has increased acne.

Indicates metabolic production of androgen or relative estrogen deficiency.

1st choice: Switch to a 100-mcg.-estrogen combination (such as **Enovid-E*** or a sequential).



Unmasked, physiologically and anatomically, they're not all the same. A basic difference lies in their hormone profiles. One may secrete too much estrogen, another not enough...or perhaps too much androgen; the vast majority would fit somewhere into the broad center spectrum.

Although the profiles described below may not be completely predictive, in optimal O.C. selection, the estrogen-progestogen activity ratio should be carefully matched to the patient profile. Searle offers you O.C.s in a range not only suitable for your patients in the balanced center spectrum, but also adaptable to the patient with another type of hormone profile.

Oral contraceptives are complex medications. Among the commonly reported adverse reactions are: intracycle bleeding, fluid retention, tender or swollen breasts, exacerbation of acne condition, changes in libido, amenorrhea while on medication and upon discontinuance, nausea, leg cramps, headaches, weight gain. Therefore, after reference to the prescribing information, oral contraceptives should be prescribed with care.

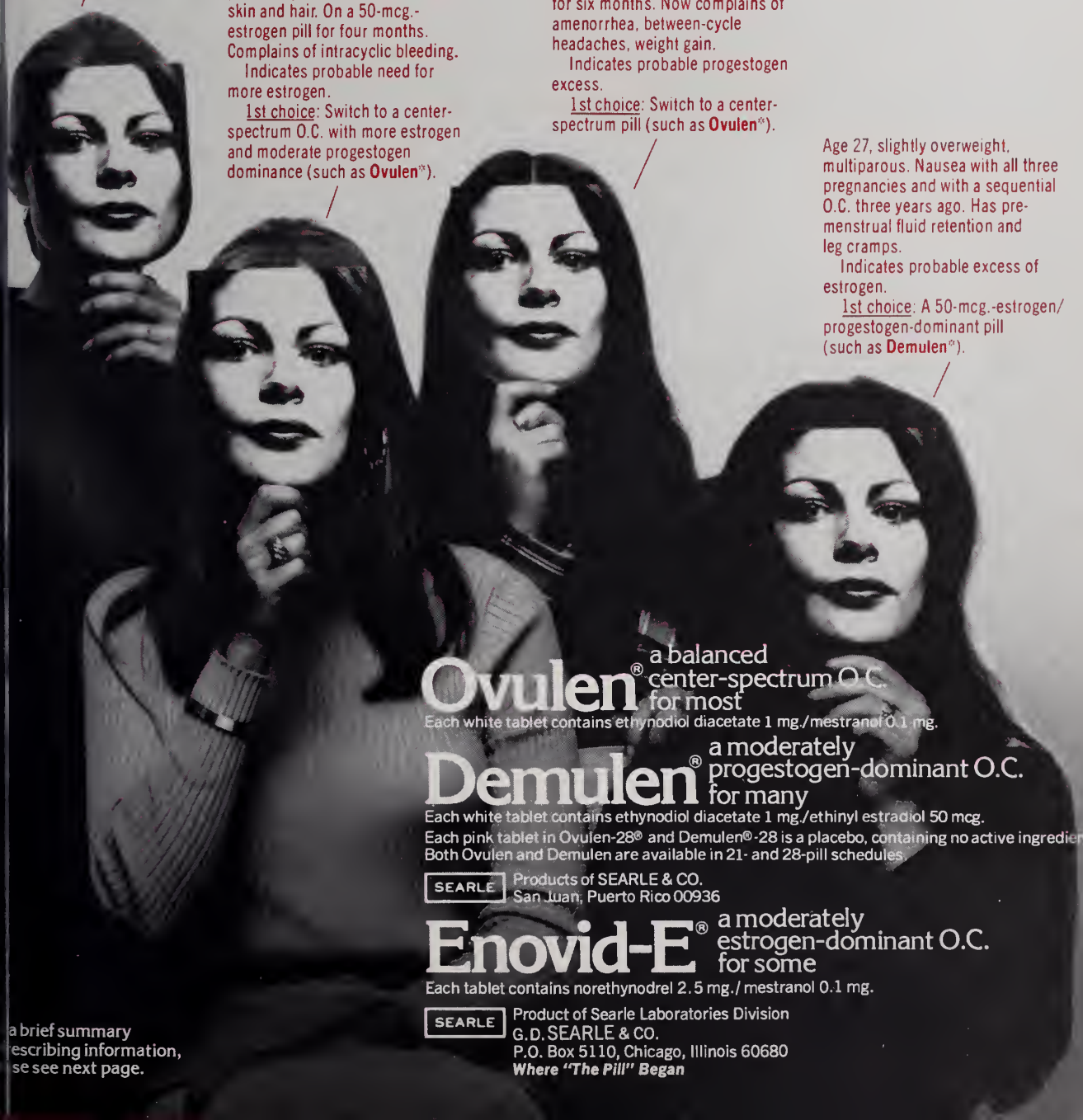
*Note: In some patients any level of exogenous estrogen or progestogen may produce symptoms of excess hormone activity.

25, tall, slender, athletic,
flat chest. On a progestogen-
inant 50-mcg.-estrogen O.C.
recurrent trichomoniasis
Monilia.
dicates estrogen deficiency and
ss of progestogen in current O.C.
st choice: Switch to a com-
tion pill with 100 mcg.
ogen and less progestational
ity (such as **Enovid-E*** or
en* or a sequential).

Age 23, "Miss America" figure, previously normal menses, healthy skin and hair. On a 50-mcg.-estrogen pill for four months. Complains of intracyclic bleeding.
Indicates probable need for more estrogen.
1st choice: Switch to a center-spectrum O.C. with more estrogen and moderate progestogen dominance (such as **Ovulen***).

Age 21, college senior, average build. On highly progestogen-dominant/low-dose-estrogen O.C. for six months. Now complains of amenorrhea, between-cycle headaches, weight gain.
Indicates probable progestogen excess.
1st choice: Switch to a center-spectrum pill (such as **Ovulen***).

Age 27, slightly overweight, multiparous. Nausea with all three pregnancies and with a sequential O.C. three years ago. Has pre-menstrual fluid retention and leg cramps.
Indicates probable excess of estrogen.
1st choice: A 50-mcg.-estrogen/progestogen-dominant pill (such as **Demulen***).



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Each white tablet contains ethynodiol diacetate 1 mg./mestranol 0.1 mg.

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Where "The Pill" Began

a brief summary
escribing information,
se see next page.

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Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Actions – Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note – Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication – Ovulen and Demulen are indicated for oral contraception.

Contraindications – Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings – The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions – The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possibl influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrena hepatic or uterine function awaits further study. A decrease in glucose toleranc has been observed in a significant percentage of patients on oral contracep tives. The mechanism of this decrease is obscure. For this reason, diabetic pa tients should be carefully observed while receiving Ovulen or Demulen therap The age of the patient constitutes no absolute limiting factor, although treatmer with Ovulen or Demulen may mask the onset of the climacteric. The pathologis should be advised of Ovulen or Demulen therapy when relevant specimens ar submitted. Susceptible women may experience an increase in blood pressur following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contracep tives – A statistically significant association has been demonstrated betwee use of oral contraceptives and the following serious adverse reactions: thrombo phlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relatior ship has been neither confirmed nor refuted for the following serious advers reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving ora contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdom inal cramps and bloating), breakthrough bleeding, spotting, change in menstrua flow, amenorrhea during and after treatment, edema, chloasma or melasma breast changes (tenderness, enlargement and secretion), change in weigh (increase or decrease), changes in cervical erosion and cervical secretions, sup pression of lactation when given immediately post partum, cholestatic jaundice migraine, rash (allergic), rise in blood pressure in susceptible individuals an mental depression.

Although the following adverse reactions have been reported in users c oral contraceptives, an association has been neither confirmed nor refutec anovulation post treatment, premenstrual-like syndrome, changes in libid changes in appetite, cystitis-like syndrome, headache, nervousness, dizz ness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contra ceptives: hepatic function: increased sulfobromophthalein retention and othe tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X thyroid function: increase in PBI and butanol extractable protein bound iodin and decrease in T^3 uptake values; metyrapone test and pregnanediol dete mination.

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Indication – Enovid-E is indicated for oral contraception.

The *Special Note*, *Contraindications*, *Warnings*, *Precautions* and *Adverse Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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Where "The Pill" Began

27?

Letters To The Editor

The Letters To The Editor column is a means for the KMA physicians to express their opinions and viewpoints on varied topics. If you have an item you would like brought before your fellow practitioners, please submit it to Letters To The Editor, Kentucky Medical Association, 3532 Ephraim McDowell Dr., Louisville, Kentucky 40205. Communications should not exceed 250 words. The right to abstract or edit is reserved by the editors of *The Journal*. Names will be withheld upon request, but anonymous letters will not be accepted.

In Appreciation

Charles Dwight Townes, M.D., professor and chairman of the Department of Ophthalmology, University of Louisville School of Medicine (1941-65), died after a brief illness, January 22, 1972. He suffered a cardiac death at St. Joseph Infirmary in Louisville where he had previously served as president of the medical staff. Doctor Townes was also an active Fellow of the American College of Surgeons and a life member of the American Academy of Ophthalmology and Otolaryngology.

Doctor Townes was born in Beech Grove, Kentucky, July 19, 1899, the son of Edna Earl Boston and a leading general physician of the area, Isaac Johnson Townes, M.D. His early life and education were spent in Madisonville, and he then attended Cornell University before returning to the University of Louisville School of Medicine, where he graduated in 1924. His residency training in ophthalmology, in common with many of his colleagues of Kentucky at that time, was obtained at the Brooklyn Eye and Ear Hospital. Shortly after beginning practice in Louisville, he joined Adolph O. Pfingst, M.D., a predecessor of his as chairman of ophthalmology at the University. In 1936 he became the fifth Kentuckian to be elected a Fellow of the American Ophthalmological Society.

He was continuously a volunteer and non-paid member of the faculty of ophthalmology from 1926 until his death. He was among the very first physicians to volunteer for active military duty during World War II and was actually appointed chairman of the department while on leave in 1941 with the U.S. Army. He was on active duty for over three years in San Antonio and retired as a Lieutenant Colonel. He quietly, but clearly rose to the ophthalmic leadership mantel in his community and his State which he acquired from Doctor Pfingst. He was personally responsible for holding together a large and active volunteer teaching faculty and also in bringing together the first, full-time staff in ophthalmology which his University had ever known. From the mid 1950's, he particularly encouraged a program in clinical investigation and began the development of the Lions Eye Research Institute which was completed and dedicated as a $2 million project in June, 1969. He received a 25-year Service Award from the University of Louisville in 1951, and in 1966 received the Distinguished Alumnus Award for his development of ophthalmology.

Dwight Townes distinctly served as both leader and guardian of medical ethics and responsibilities in his area of the nation. He constantly strengthened the opportunities for young men to develop their practices and their commitments. He maintained the obligation of physicians to be separated from merchandising activities related to medicine, and also the need to foster a community and a university program with both full time and visiting faculty. He dutifully accepted the need to serve on many hospital, medical society and organizational committees, but appropriately relinguished these to younger men at the earliest, appropriate time. He was a director of both the National Society and the Kentucky Society for the Prevention of Blindness.

His quiet and constructive role is being continued by his two sons in medicine, Charles D. Townes, Jr. and David Townes, and by many other self-adopted "sons" and "daughters" who have been associated with his inspiration and his leadership.

Arthur H. Keeney, M.D.
Ophthalmologist-In-Chief
Wills Eye Hospital and Research Institute
Philadelphia, Pennsylvania

A Link in the Chain

auxiliary

Stouffer's Louisville Inn will be the site of the 50th Annual Convention of the Woman's Auxiliary to the Kentucky Medical Association. It will be held September 18-20 in conjunction with the Annual Meeting of KMA.

The Convention is being planned to give a greater opportunity to enjoy the sights of Louisville and to give individual members more information to help them in their county auxiliary activities during the coming year.

I extend a warm invitation to all physicians' wives, whether they be members of WA-KMA or not, to attend the activities listed below. I can promise you a rewarding experience.

MRS. DAVID B. STEVENS, PRESIDENT
WOMAN'S AUXILIARY TO KMA



Mrs. Stevens

Woman's Auxiliary to the Kentucky Medical Association GOLDEN ANNIVERSARY CONVENTION September 18-20, 1972

Stouffer's Louisville Inn — 120 W. Broadway — Louisville, Kentuck

MONDAY, SEPTEMBER 18

12:00 noon-4:00 p.m.
Registration—Mezzanine

6:00 p.m.
KEMPAC Reception, Dinner and Seminar
Grand Ballroom
Guest Speakers—Walter "Dee" Huddleston and Louie B. Nunn

TUESDAY, SEPTEMBER 19

8:00 a.m.-4:00 p.m.
Registration—Mezzanine

8:00-9:15 a.m.
Continental Breakfast—Mezzanine

8:30 a.m.-4:00 p.m.
Country Store and Exhibits—Mezzanine

8:30 a.m.
Pre-Convention Board Meeting—Ballroom A

9:30 a.m.
Convention Business Session—Ballroom A

12:30 p.m.
Luncheon and Fashion Show by Stewart's
—Ballrooms A and B

5:30-7:00 p.m.
Cocktail Party Honoring
Lee C. Hess, M.D., President-
of KMA and Mrs. George W. Sch
President-Elect of WA-KMA
Stouffer's Inn, Tenth Floor

WEDNESDAY, SEPTEMBER 20

8:30-11:30 a.m.
Registration—Mezzanine

8:30-9:00 a.m.
Continental Breakfast—Mezzanine

9:00-11:30 a.m.
Post-Convention Board Meeting
County President Idea Exchange
Workshops for County Committee
Chairmen—South Room A

11:50 a.m.
President's Luncheon
Grand Ballroom
Guest Speaker—Mark Russell, Pol
Satirist
Topic—"Politics Is A Laughing Ma

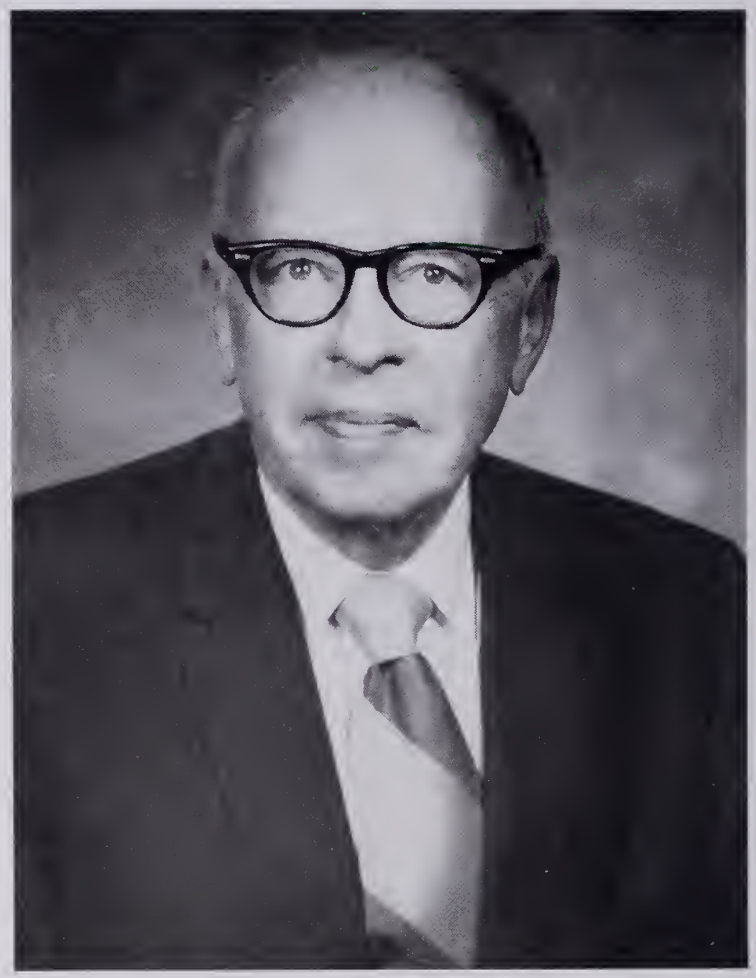
1972

Annual Meeting Section

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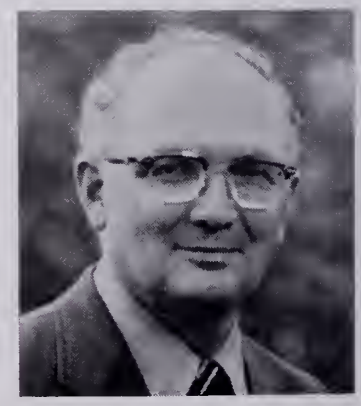
KMA Officers *1971-1972*



JOHN S. HARTER, M.D.
PRESIDENT



Lee C. Hess, M.D.
President-Elect



Carroll H. Robie, M.D.
Vice-President

PRESIDENT-ELECT

Lee C. Hess, M.D.
Florence

A highlight of the 1972 Annual Meeting will be the installation of Doctor Hess as president of the Kentucky Medical Association on Wednesday, September 20, at the President's Luncheon.

A KMA Trustee for the Eighth District since 1966, Doctor Hess served as chairman of the Board of Trustees in the Associational years of 1968-69 and 1970-71. He was a delegate to KMA from Boone County from 1960-66.

Doctor Hess graduated from Xavier University and the University of Louisville School of Medicine, serving his internship at St. Elizabeth Hospital in Covington.

A general practitioner in Florence since 1957, Doctor Hess is active in the affairs of the Boone County Medical Society and is an associate member of the Campbell-Kenton Medical Society. He is also a member of the Kentucky and American Academy of Family Physicians.

Doctor Hess has served on the Interim Meeting Program Committee and the Scientific Program Committee of KMA. He is recognized as an outstanding member of his profession for his contributions in the field of health care and for his active participation in the affairs of medicine.

VICE-PRESIDENT

Carroll H. Robie, Jr., M.D., Louisville

An assistant clinical professor of medicine at the University of Louisville School of Medicine, Doctor Robie has been very active in medical affairs both on the local and state level. He presently serves as chairman of the Grievance Committee of the Jefferson County Medical Society and is a member of the Governor's Advisory Council for Health Facilities.

A 1949 graduate of Ohio State University College of Medicine, Doctor Robie is the past president of the Louisville Society of Internists. He is a Fellow of the American College of Physicians and belongs to the American Society of Internal Medicine and the Transylvania Medical Society.

SECRETARY

S. Randolph Scheen, M.D., Louisville



Doctor Scheen, serving his fifth year as KMA secretary, is an assistant clinical professor at the University of Louisville School of Medicine and the University of Kentucky College of Medicine. A practicing dermatologist, Doctor Scheen graduated from U of L in 1953 and received his master of science degree in dermatology from the University of Minnesota in 1960. He is a member of the American Academy of Dermatology and the Alumni Association of the Mayo Foundation. Doctor Scheen serves on the KMA Judicial Council and was a former member of the Claims and Utilization Review Committee.

TREASURER

Keith P. Smith, M.D., Corbin



In addition to serving KMA as its treasurer since 1963, Doctor Smith is a former Association vice-president and chairman of the Board of Trustees. A 1936 graduate of the University of Louisville School of Medicine and a 1944 graduate of the School of Aviation Medicine, Randolph Field, Texas, Doctor Smith is a general surgeon. A former president and vice-president of the Kentucky Academy of Family Physicians, Doctor Smith is also active in community affairs. He was the first chief of staff of the Corbin Municipal Hospital and presently serves as chief of obstetrics and gynecology at Southeastern Kentucky Baptist Hospital in Corbin.

Officers of the House of Delegates

SPEAKER

Richard F. Greathouse, M.D., Louisville



Doctor Greathouse has served as speaker of the KMA House of Delegates since 1966, having been a former vice-speaker and delegate from the Jefferson County Medical Society. He is associate professor of pediatrics at the University of Louisville School of Medicine and School of Dentistry. Doctor Greathouse received his M.D. degree in 1951 from the University of Louisville. A past secretary-treasurer of KEMPAC, he is also active in the Kentucky Chapter, American Academy of Pediatrics, having been vice-chairman of this group.

VICE-SPEAKER

Carl C. Cooper, M.D., Bedford



A general practitioner, Doctor Cooper has been active in Associational affairs. He is a former KMA vice-president and alternate delegate to AMA. A former vice-president of the Kentucky Academy of Family Physicians, he also belongs to the American Academy of Family Physicians. He is a 1952 graduate of the University of Louisville School of Medicine and formerly served as chairman of the KMA Senior Day Committee. Doctor Cooper currently serves on the KMA Committee on Orientation.

AMA Delegates

J. Thomas Giannini, M.D., Louisville



Doctor Giannini has served KMA as a delegate to AMA since 1963 and had previously served as an alternate delegate to AMA and as chairman of the Scientific Exhibits Committee. He graduated from the University of Louisville School of Medicine in 1938 and served in the U. S. Navy Medical Corps. A Fellow of the American Society of Plastic and Reconstructive Surgeons, he belongs to the Kentucky and Louisville surgical societies. He is on the Board of Trustees of the Kentucky Blue Cross Hospital Plan, Inc.

John C. Quertermous, M.D., Murray



A 1942 graduate of the University of Louisville School of Medicine, Doctor Quertermous has practiced internal medicine in Murray since 1950. The immediate past president of KMA, he served as a delegate to AMA from 1963-69, is a former chairman of the Committee on Legislative Activities for National Affairs and a former chairman of the KEMPAC Board of Directors. He has been a member of the KMA Board of Trustees since 1963. Active in civic affairs, Doctor Quertermous has served on the Governor's Citizens Committee on the Problems of the Aging.

David B. Stevens, M.D., Lexington



Elected as delegate to AMA in 1971, Doctor Stevens served as an alternate delegate since 1965 and serves on the AMA Committee on Quackery. He is a past president of the Fayette County Medical Society and the Kentucky Orthopaedic Society. Within KMA Doctor Stevens was a member of the Committee on Legislative Activities and is currently chairman of the Committee on Cults. A 1955 graduate of Northwestern University Medical School, he is an assistant clinical professor of surgery at the University of Kentucky College of Medicine.

Journal Editors

EDITOR

Walter I. Hume, Jr., M.D., Louisville

Doctor Hume has served as editor of *The Journal* since August, 1970, having previously been assistant editor. A past president of the Jefferson County Medical Society, Doctor Hume is now chairman of the KFMC Health Care Delivery Committee and is a member of the KMA Committee on Public Relations. A 1949 graduate of Harvard Medical School, he is associate clinical professor of surgery at the University of Louisville School of Medicine and has practiced general surgery in Louisville for 15 years.



ASSOCIATE EDITOR

Henry B. Asman, M.D., Louisville

Now serving as president of the Kentucky Foundation for Medical Care, Doctor Asman is in his second year as associate editor. In KMA he has served as president in 1968, vice-president in 1961 and secretary from 1963-67. Presently he is Medical Consultant for Kentucky Blue Cross and Blue Shield. A 1936 graduate of the University of Louisville School of Medicine, Doctor Asman is the past president of the Ohio Valley Proctologic Society and serves on the KMA Advisory Committee to the Woman's Auxiliary.



ASSISTANT EDITOR

Sam A. Overstreet, M.D., Louisville

Extremely active in the affairs of *The Journal,* Doctor Overstreet was editor for eight years, associate editor for three years and has been assistant editor for the past two years. A past KMA president, Doctor Overstreet also was speaker of the KMA House of Delegates, has served on the Advisory Committee to Selective Service and is currently a member of the Awards Committee and Advisory Committee to Blue Cross. A 1923 University of Louisville graduate, he has practiced internal medicine in Louisville for more than 40 years.



New Trustees

Carl J. Brueggemann, M.D., Covington

A graduate of the University of Louisville School of Medicine in 1953, Doctor Brueggemann has been a delegate to KMA from the Campbell-Kenton Medical Society since 1963. He is a member of the KMA Committee on Liability Insurance. Doctor Brueggemann, a general practitioner, is also a member of the American Academy of Family Physicians.

W. Eugene Sloan, M.D., Paducah

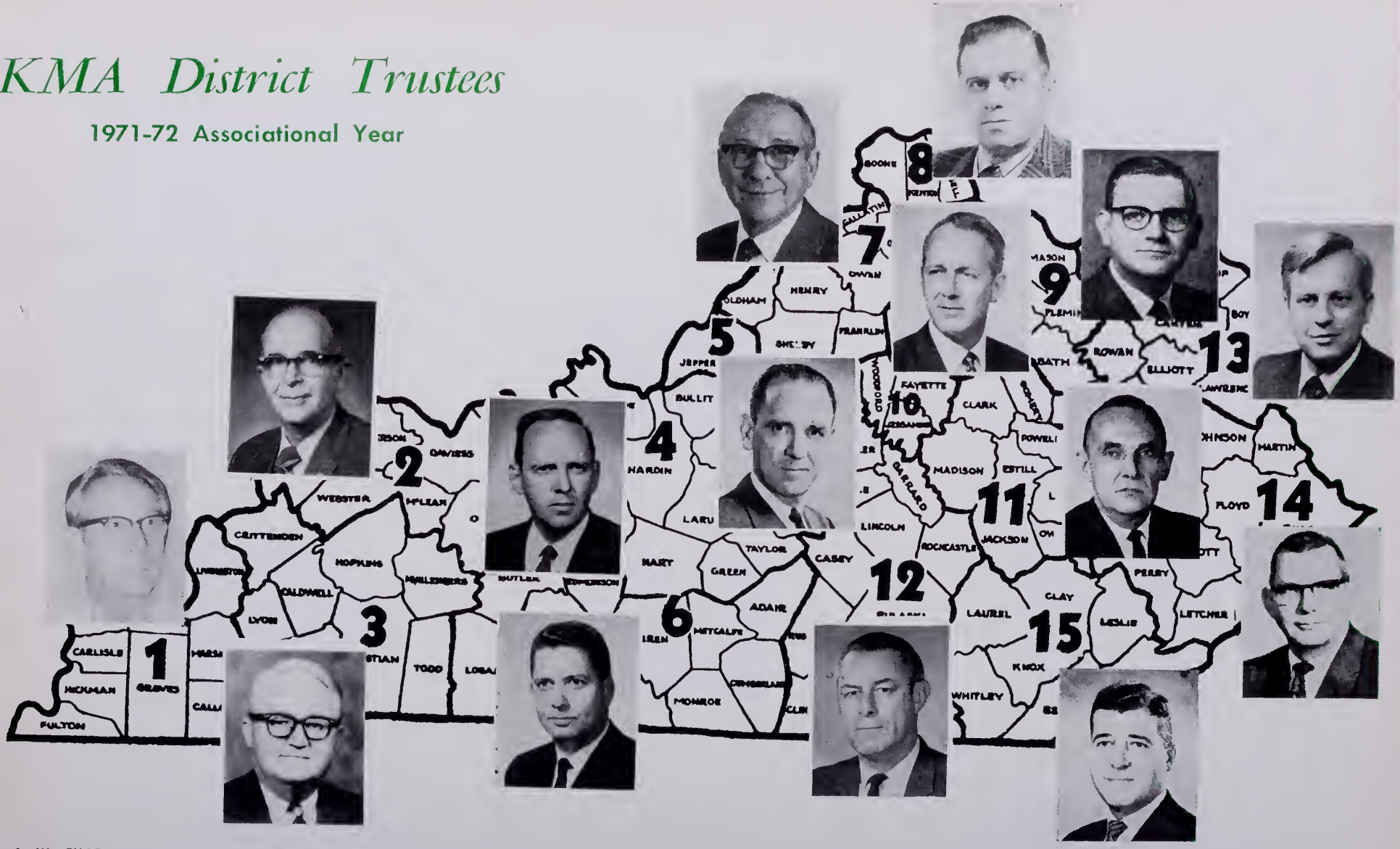
A native of Illinois, Doctor Sloan received his M.D. degree from the University of Louisville School of Medicine in 1944. He is a former president of the McCracken County Medical Society and served on the KMA Hospital Committee. He is currently a Director of the Kentucky Foundation for Medical Care and belongs to the KMA Committee on Liability Insurance.

Ralph L. Cash, M.D., Princeton

Doctor Cash, a 1940 graduate of Vanderbilt University, is vice-president of the Pennyrile Medical Society and is Kentucky's representative to the Health Care Study Group of the Tennessee Mid-South Regional Medical Program. A former Director of the Kentucky Academy of Family Physicians, Doctor Cash is a charter member of the American Academy of Family Physicians.

KMA District Trustees

1971-72 Associational Year



1. W. EUGENE SLOAN
Paducah

2. CHARLES C. KISSINGER
Henderson

3. RALPH L. CASH
Princeton

4. W. BRUCE HAMILTON
Shepherdsville

5. JOHN S. LLEWELLYN*
Louisville

6. PAUL J. PARKS*
Bowling Green

7. THOMAS P. LEONARD, SR.
Frankfort

8. CARL J. BRUEGGEMANN
Covington

9. J. CAMPBELL CANTRILL
Georgetown

10. DAVID A. HULL*†
Lexington

11. DOUGLAS H. JENKINS
Richmond

12. ROBERT N. McLEOD*
Somerset

13. J. WESLEY JOHNSON
Ashland

14. BALLARD W. CASSADY
Pikeville

15. E. C. SEELEY
London

*Member, KMA Executive Committee

ELECTIONS

Election of Trustees and Alternate Trustees

The **House of Delegates** will elect five district trustees and five alternate trustees at its second session, Wednesday, September 20. Nominations will be made by the delegates from the electing districts at a meeting following the first session of the House on Monday, September 18.

At the close of the first scientific session on Tuesday, September 19, the Committee will report its nominees. Further nominations may be made from the floor at the final meeting of the House of Delegates, Wednesday evening, September 20. All nominations are considered and acted upon by the delegates at this final session.

Districts electing trustees for three-year terms are: FIFTH DISTRICT (incumbent John S. Llewellyn, M.D., Louisville); SIXTH DISTRICT (incumbent Paul J. Parks, M.D., Bowling Green); EIGHTH DISTRICT (incumbent Carl J. Brueggemann, M.D., Covington); ELEVENTH DISTRICT (incumbent Douglas H. Jenkins, M.D., Richmond); FIFTEENTH DISTRICT (incumbent E. C. Seeley, M.D., London).

Districts electing alternate trustees are the same as those electing trustees. Incumbents are Lloyd G. Yopp, M.D., Louisville (5th); Carlisle V. Dodson, M.D., Russellville (6th); Robert C. Smith, M.D., Newport (8th); Hugh Mahaffey, M.D., Richmond (11th); and Harold L. Bushey, M.D., Barbourville (15th).

Trustees and alternate trustees of the 5th, 6th, and 8th Districts are eligible for re-election; while the trustees and alternates of the 11th and 15th Districts have served two full terms and are not eligible for re-election.

House to Elect New Officers At KMA Annual Meeting

The House of Delegates will elect the KMA officers for the 1972-73 Associational year at the close of its final session Wednesday evening, September 20. Officers to be selected this year are:

President-Elect	**(Western District)**	**One Year**
Vice-President	**(Eastern District)**	**One Year**
Secretary	***(S. Randolph Scheen, Louisville)**	**Three Years**
Treasurer	***(Keith P. Smith, Corbin)**	**Three Years**
Delegate to AMA	***(J. Thomas Giannini, Louisville)**	**Two Years**
Alternate Delegate	***(Charles G. Bryant, Louisville)**	**Two Years**

***Incumbent**

The AMA Delegate and Alternate from KMA are to be elected for the term of two years, from January 1, 1973 to December 31, 1974.

The KMA Bylaws provide that the Trustees to be elected will be nominated by the Delegates of their respective Districts at the time of the Annual Meeting. The Bylaws further provide that it is the obligation of the Districts to communicate to the Nominating Committee their nominations at the Annual Meeting. Alternate Trustees will be nominated in this same manner.

Nominating Committee to Meet After First Session of House

An open meeting of the KMA Nominating Committee will be held following the close of the first session of the House of Delegates, Monday, September 18, in the rear of the Grand Ballroom of Stouffer's Louisville Inn.

Any KMA member has the privilege of conferring with the Committee during this meeting. Final recommendations of the Committee will be reported at the end of the first scientific session, Tuesday morning, September 18.

Nominations may be made from the floor at the second meeting of the House of Delegates, Wednesday evening, September 20. The House will vote on the nominees at the close of this session.

Members of the nominating Committee, chaired by Harold L. Bushey, M.D., Barbourville, are: Coy E. Ball, M.D., Owensboro; Thomas L. Heavern, Jr., M.D., Highland Heights; Robert L. McClendon, M.D., Louisville; and Nelson B. Rue, M.D., Bowling Green.

KMA Delegates

ADAIR
James C. Salato, Columbia

ALLEN
Earl P. Oliver, Scottsville

ANDERSON

BALLARD

BARREN
Daryl P. Harvey, Glasgow

BATH
Robert L. Suttles, Owingsville

BELL
Francis A. Forde, Middlesboro
Emanuel H. Rader, Pineville

BOONE
William R. Yates, Hebron

BOURBON
Richard J. Wever, Paris

BOYD
D. H. Donahoe, Catlettsburg
Okey H. Sanford, Ashland
C. A. Webb, Ashland

BOYLE
John M. Baird, Danville

BRACKEN
J. M. Stevenson, Brooksville

BREATHITT
F. C. Lewis, Jackson

BRECKINRIDGE
James G. Sills, Hardinsburg

BULLITT
R. Stephen Bowen, Mt. Washington

BUTLER
D. G. Miller, Jr., Morgantown

CALLOWAY
Donald G. Hughes, Murray

CAMPBELL-KENTON
Thomas J. Huth, Covington
Alfred A. Jacobs, Erlanger
W. Vinson Pierce, Covington
Robert E. Smith, Covington
Jerry C. Sutkamp, Bellevue
R. J. Timmerman, Newport

CARLISLE
John T. O'Neill, Arlington

CARROLL
E. S. Weaver, Carrollton

CARTER

CASEY
George W. Sweeney, Liberty

CLARK
Earl B. Rynerson, Winchester

CLAY
W. E. Becknell, Manchester

CLINTON
Floyd B. Hay, Albany

CRITTENDEN
R. M. Brandon, Marion

CUMBERLAND
J. W. Morris, Burkesville

DAVIESS
J. S. Oldham, Owensboro
W. E. Pearson, Owensboro
Marilyn M. Sanders, Owensboro

EDMONSON

ELLIOTT

ESTILL
S. G. Marcum, Irvine

FAYETTE
Ted D. Ballard, Lexington
John F. Berry, Jr., Lexington
Leslie W. Blakey, Lexington
Peter P. Bosomworth, Lexington
T. R. Bryant, Jr., Lexington
Winston L. Burke, Lexington
Richard D. Floyd, Lexington
Richard F. Hench, Lexington
James B. Holloway, Lexington
W. Porter Mayo, Lexington
Richard B. McElvein, Lexington
Carl H. Scott, Lexington
John E. Trevey, Lexington
James G. Wilhite, Lexington

FLEMING
R. W. Fidler, Flemingsburg

FLOYD
Lowell D. Martin, Martin

FRANKLIN
W. H. Keller, Frankfort

FULTON
Glynn F. Bushart, Fulton

GALLATIN
John D. Fielding, Jr., Warsaw

GARRARD
B. Glenn Hicks, Lancaster

GRANT
C. C. Waldrop, Williamstown

GRAVES
C. Douglas LeNeave, Mayfield

GRAYSON
Victor F. Duvall, Clarkson

GREEN
K. J. DeSimone, Greensburg

GREENUP
Manuel S. Garcia, Flatwoods

HANCOCK
B. P. Smith, Hawesville

HARDIN
Robert E. Robbins, Elizabethtown

HARLAN
Howard L. Elliott, Harlan
Walter H. Stepchuck, Harlan

HARRISON
Don R. Stephens, Cynthiana

HART
James P. Crews, Cave City

HENDERSON
Kenneth M. Eblen, Henderson
John W. McClellan, Henderson

HENRY
S. Brooks May, Eminence

HICKMAN
C. J. Mills, Clinton

HOPKINS
Charles R. Fisher, Madisonville
Kenneth P. Haywood, Madisonville

JACKSON
D. L. Peterson, McKee

JEFFERSON

John D. Allen, Jr., Louisville
Frank A. Bechtel, Louisville
William H. Bizot, Louisville
Alan M. Bornstein, Louisville
Glenn W. Bryant, Louisville
Peter C. Campbell, Jr., Louisville
W. Neville Caudill, Louisville
Stanley W. Collis, Louisville
Eugene H. Conner, Louisville
John H. Doyle, Louisville
Andrievs J. Dzenitis, Louisville
Edward J. Fadell, Louisville
William H. Gillespie, Louisville
John N. Goldsborough, Louisville
Richard F. Greathouse, Louisville
Edward M. Haick, Louisville
Charles M. Hargadon, Louisville
Michael G. Kemper, Louisville
Eugene H. Kremer, III, Louisville
Robert L. McClendon, Louisville
Clyde T. Moore, Louisville
Charles R. Oberst, Louisville
Robert G. Overstreet, Louisville
C. Kenneth Peters, Louisville
Bernard I. Popham, Louisville
Clinton Ray Potts, Louisville
James F. Rice, Louisville
W. Fielding Rubel, Louisville
William J. Sandman, Jr., Louisville
Robert P. Schiavone, Louisville
David C. Shipp, Louisville
Edward C. Shrader, Louisville
Edwin P. Solomon, Jr., Louisville
Robert S. Tillett, Louisville
Lloyd G. Yopp, Louisville

JESSAMINE

Dale E. Dunkelberger, Wilmore

JOHNSON

Franklin K. Belhasen, Paintsville

KNOTT

Gene T. Watts, Hindman

KNOX

Harold L. Bushey, Barbourville

LARUE

Marion A. Douglas, Magnolia

LAUREL

John B. Rypstra, London

LAWRENCE

A. B. Richards, Louisa

LEE

Carl W. Noble, Beattyville

LESLIE

Anne A. Wasson, Hyden

LETCHER

J. B. Tolliver, Whitesburg

LEWIS

LINCOLN

E. C. Bowling, Stanford

LIVINGSTON

Stephen Burkhart, Salem

LOGAN

C. V. Dodson, Russellville

LYON

Mort H. Moseley, Eddyville

MADISON

Dwight L. Blackburn, Berea

MAGOFFIN

MARION

Robert H. Wilber, Lebanon

MARSHALL

Keith E. Ellis, Benton

MARTIN

Raymond D. Wells, Inez

MASON

Mitchel B. Denham, Maysville

McCRACKEN

Walter R. Johnson, Paducah
Norman A. Parrott, Paducah
James C. Seabury, Paducah

McCREARY

Hoover H. Perry, Whitley City

McLEAN

E. S. Coleman, Sacramento

MEADE

MENIFEE

MERCER

John S. Baughman, III, Harrodsburg

METCALFE

L. P. Emberton, Edmonton

MONROE

Marcus Patton, Gamaliel

MONTGOMERY

J. M. Bush, Mt. Sterling

MORGAN

George R. Bellamy, West Liberty

NELSON

Emmett F. Wood, Bardstown

NICHOLAS

Allen J. Hamon, Carlisle

OHIO

Robert E. Norsworthy, Hartford

OLDHAM

J. H. Leland, Crestwood

OWEN

Maurice Bowling, Owenton

OWSLEY

Arnold L. Taulbee, Beattyville

PENDLETON

William M. Townsend, Falmouth

PENNYRILE

Caldwell: Nathaniel H. Talley, Princeton
Christian: Ben L. Crowder, Hopkinsville
Frank R. Pitzer, Hopkinsville
Muhlenberg: Ronilo D. Diaz, Greenville
Todd: Henry R. Bell, Elkton
Trigg: William N. Richardson, Cadiz

PERRY

Donald L. Martin, Ary

PIKE

William M. Johnson, Pikeville
Harvey A. Page, Pikeville

POWELL

Sam E. Cecil, Stanton

PULASKI

J. Roy Biggs, Somerset
W. O. Massey, Burnside

ROBERTSON

ROCKCASTLE

ROWAN

George C. Barber, Morehead

RUSSELL

James E. Monin, Jamestown

SCOTT

R. K. Brown, Georgetown

SHELBY

Ronald E. Waldridge, Shelbyville

SIMPSON

L. F. Beasley, Franklin

SPENCER
William K. Skaggs, Taylorsville

TAYLOR

TRIMBLE

UNION
Wallas N. Bell, Sturgis

WARREN
Keith M. Coverdale, Bowling Green
Harold Keen, Bowling Green
James O. Willoughby, Bowling Green

WASHINGTON
Harold B. Simms, Springfield

WAYNE
Robert B. Breeding, Monticello

WEBSTER
Paul M. Taylor, Providence

WHITLEY
R. D. Pitman, Williamsburg

WOLFE
Paul F. Maddox, Campton

WOODFORD
Olson Parrott, Versailles

OFFICIAL CALL
KMA Annual Meeting

To the officers and members of the component county medical societies of the Kentucky Medical Association.

Meeting Place

The Annual Meeting of KMA will convene on Tuesday, Wednesday and Thursday, September 19, 20 and 21, at the Convention Center, Louisville. The first general session will be called to order at 8:50 a.m., Tuesday.

The House of Delegates

The first regular session of the House of Delegates will convene at 9:00 a.m., Monday, September 18. The second regular business session will begin at 7:00 p.m., Wednesday, September 20. Both sessions will be held in the Grand Ballroom, Stouffer's Louisville Inn.

Registration

The registration desk will open outside the Grand Ballroom of the Stouffer's Inn at 8:00 a.m., Monday, September 18 and at 6:00 p.m., Wednesday. September 20. It will be open in the Technical Exhibit Hall of Convention Center from 8:00 a.m. to 5:00 p.m., Tuesday, Wednesday and Thursday, September 19-21.

Emergency Messages Transferred Through 584-2201 at Meeting

A Message Center will be set up during the Annual Meeting where you may be reached in case of an emergency or for routine messages. The number is (502) 584-2201.

Located in the center of the Technical Exhibit Hall at Convention Center, it will be staffed at all times during the Meeting. Due to the arrangement of facilities for the meeting, paging of individual physicians is not possible.

Only emergency calls will be posted on the blackboard in the entrance lobby of Convention Center and in the Scientific Assembly Hall. All other messages will be kept on file at the Message Center until you call for them; so please check there frequently for your messages.

It will be possible to locate other physicians attending the meeting by asking the Message Center to keep your message for pick-up.

The phone number at the Headquarters Hotel, Stouffer's Inn, is 582-2241. You may be reached during the meetings of the House of Delegates on September 18 and September 20 by having your calls directed to the Grand Ballroom. Your name will be posted on a blackboard at the front of the room when you receive a call.

You are urged to make use of the Message Center. Be sure to leave these phone numbers at your home, office and hospital.



While Attending The Meeting . . . . . .

Since parking is rather limited at Stouffer's Louisville Inn, there will be available parking across from Stouffer's at the Portland Federal Building.

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You may wish to note that reservations are required for anyone wanting to eat at the Cup and Stirrup Room, the dining room atop of Stouffer's Inn. The Tuesday evening reception honoring KMA and WA-KMA President-Elects will be held in the Tack Room which is directly adjacent to the Cup and Stirrup Room and staff wanted to inform everyone attending the meeting of the need for reservations in this dining room.

Reference Committee Activity

Speaker Richard F. Greathouse, M.D., Louisville, will assign **all officers' and committees' reports and resolutions** to one of six reference committees at the first meeting of the KMA House of Delegates at 9 a.m., Monday, September 18. **Briefing sessions** for reference committee chairmen will be held at **12:30 p.m., Monday, in Ballroom A, Stouffer's Inn.** Any KMA member wishing to testify on any resolution or report is urged to be present for the **reference committee meetings which will be held at 2 p.m., Monday, September 18, at Stouffer's Inn.** These open sessions will last at least one hour in order for all who wish to speak to be heard. Following the open hearings, the committees will go into executive sessions to study the reports, review the testimony and write their reports to the House.

The committees' recommendations will be presented **at the final session of the House, Wednesday night, September 20,** in the Grand Ballroom, Stouffer's Inn. Listed below are the reference committees appointed by Doctor Greathouse to serve during the 1972 session.

1972 Reference Committee Appointments

REFERENCE COMMITTEE NO. 1
Sycamore Room

Harold L. Bushey, M.D., Barbourville, Chairman
Eugene H. Conner, M.D., Louisville
William E. Pearson, Jr., M.D., Owensboro
L. F. Beasley, M.D., Franklin
John E. Trevey, M.D., Lexington

REFERENCE COMMITTEE NO. 2
Hunt Room

Peter P. Bosomworth, M.D., Lexington, Chairman
Earl P. Oliver, M.D., Scottsville
Lloyd G. Yopp, M.D., Louisville
C. Douglas LeNeave, M.D., Mayfield
Charles A. Webb, M.D., Ashland

REFERENCE COMMITTEE NO. 3
Tack Room

John S. Oldham, M.D., Owensboro, Chairman
James G. Wilhite, M.D., Lexington
Robert G. Overstreet, M.D., Louisville
Raymond J. Timmerman, M.D., Ft. Thomas
Harvey A. Page, M.D., Pikeville

REFERENCE COMMITTEE NO. 4
South Room A

Clinton Ray Potts, M.D., Louisville, Chairman
William N. Richardson, M.D., Cadiz
John M. Baird, M.D., Danville
James B. Holloway, M.D., Lexington
Ronald E. Waldridge, M.D., Shelbyville

REFERENCE COMMITTEE NO. 5
Bienville South Room

Richard B. McElvein, M.D., Lexington, Chairman
Keith M. Coverdale, M.D., Bowling Green
Kenneth P. Haywood, M.D., Earlington
Walter H. Stepchuck, M.D., Harlan
David C. Shipp, M.D., Louisville

REFERENCE COMMITTEE NO. 6
Ballroom A

Glenn W. Bryant, M.D., Louisville, Chairman
Raymond D. Wells, M.D., Inez
Robert E. Smith, M.D., Covington
Mort H. Moseley, M.D., Eddyville
Mitchel B. Denham, M.D., Maysville

SPECIAL REFERENCE COMMITTEE ON RESOLUTION H
South Room B

W. Neville Caudill, M.D., Louisville, Chairman
Kenneth M. Eblen, M.D., Henderson
W. Fielding Rubel, M.D., Louisville
Lowell D. Martin, M.D., Martin
Leslie W. Blakey, M.D., Lexington

Scientific Exhibits To Display Recent Medical Advances

Several outstanding scientific exhibits have been chosen to be on display during the 1972 KMA Annual Meeting, according to Arnold C. Williams, M.D., Lexington, chairman of the Scientific Exhibits Committee.

The exhibits will depict recent developments in research and techniques and will cover a wide variety of medical topics. KMA will award a certificate to each participating exhibitor.

The scientific exhibits will be located between the Technical Exhibit Hall and the Scientific Assembly Hall in Convention Center. The exhibits to be featured at this year's meeting are:

Ischemic Limb Disease
Robert L. Dilts, M.D.

Tissue Typing
Kidney Foundation of Kentucky
Robert S. Howell, M.D.

Removal of Intravascular Foreign Bodies
Edward M. Cockerill, M.D. and
Roscoe E. Miller, M.D.

Treatment of Arthritis: Rheumatoid Arthritis, Osteoarthritis and Gout
C. Richard Gill, M.D. and
David P. Thomas, M.D.

Carcinoma of the Pharynx, Hypopharynx and Larynx
Condict Moore, M.D.

Pulmonary Rehabilitation
Paul E. Foldes, M.D.

Trauma of the Cervical Spine
Kenneth R. Kattan, M.D.

Laser Treatment of Port-Wine Spots
Leon Goldman, M.D., R. J. Rockwell, Jr., Ron Dreffer and John Johnson

Ten Years Experience with Permanent Pacemakers in a Community Hospital
Leonard Gottesman, M.D., Flavio Amongero, M.D. and Harold Pescovitz, M.D.

Esophagus Replacement with RGT
Henry J. Heimlich, M.D. and
William C. Gardner, M.D.

The Problem-Oriented Medical Record
Irving F. Kanner, M.D. and
Ronald D. Hamilton, M.D.

Current Concepts in Management of the Burn Patient
John C. Weeter, M.D., J. Thomas Giannini, M.D. and Harry D. Stambaugh, M.D.

Medical Continuing Education—Kentucky Style
Frank R. Lemon, M.D.

Percutaneous Radio Frequency Coagulation of the Gasserian Ganglion for Trigeminal Neuralgia
John M. Tew, Jr., M.D. and
Frank H. Mayfield, M.D.

Current Activities—Health Sciences Center
University of Louisville School of Medicine

Instant Information—Health Sciences Library
University of Louisville School of Medicine

Orientation Program Scheduled For September 20

The 13th KMA Orientation Program will be presented on Wednesday afternoon, September 20, in the Sycamore Room at Stouffer's Inn as a part of the 1972 Annual Meeting.

The KMA Committee on Orientation has made a number of changes in this year's program which they feel will make it more informative to new members. For the first time, the program will be presented on a voluntary basis.

The Committee has asked a number of distinguished guests to address this year's session which will include Lee C. Hess, M.D., KMA President-Elect; J. Thomas Giannini, M.D., senior KMA delegate to the AMA and Fred C. Rainey, M.D., a member of the KMA Legislative Committee for State Affairs.

Letters of invitation have been sent to all KMA members who have recently joined the Association. All KMA members are invited to attend the program whether or not they have received an invitation.

Registration for this year's program will be held at 3:30 p.m., September 20. The Orientation Program will begin promptly at 4 p.m. and will adjourn at approximately 5 p.m. The following is a schedule of this year's program.

13th KMA Orientation Program

Wyatt Norvell, M.D., New Castle
Moderator

3:30 p.m. **Registration**

4:00 p.m. **Call to Order**

4:05 p.m. **Welcome and Introduction**
Wyatt Norvell, M.D.

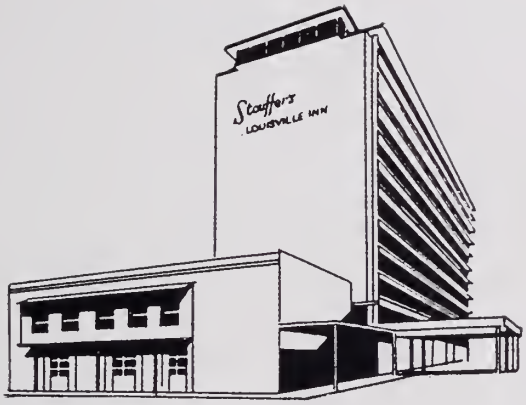
4:10 p.m. **"Your KMA"**
Henry B. Asman, M.D., Louisville
Narrator, KMA Past-President

4:30 p.m. **Question and Answer Session**
Lee C. Hess, M.D., Florence
KMA President-Elect
J. Thomas Giannini, Louisville
KMA Senior Delegate to the AMA
Fred C. Rainey, M.D., Elizabethtown
Member, KMA Legislative Committee on State Affairs
Carl Cooper, Jr., M.D., Bedford
Member, KMA Committee on Orientation
Wyatt Norvell, M.D., New Castle
Chairman, KMA Committee on Orientation

MESSAGE CENTER
584-2201

You may be reached through this number at the Convention Center during the KMA Annual Meeting.

Annual Meeting Special Features



Stouffer's Louisville Inn
KMA Annual Meeting Headquarters Hotel

THE SCIENTIFIC PROGRAM, September 19, 20 and 21, will feature many timely medical topics and nationally recognized speakers. Themes for the general sessions include "Trauma," "Atherosclerosis" and "Respiratory Distress." Presented in the Scientific Assembly Hall at Convention Center, the program will deal with subjects such as diabetes, blood fat disorders, myocardial infarction, venereal disease and multiphasic health testing.

SEVENTEEN SPECIALTY GROUPS have scheduled meetings on the afternoons of September 19 and 21. All KMA members are invited to attend any of the specialty group meetings. This year, for the first time, the Kentucky Society for Plastic and Reconstructive Surgery will hold its meeting during the KMA Annual Meeting.

THE HOUSE OF DELEGATES, top policy-making body of the Association, will meet at 9 a.m., Monday, September 18 and 7 p.m., Wednesday, September 20, in the Grand Ballroom of Stouffer's Inn. New KMA officers will be elected at the second session.

THE PRESIDENT'S LUNCHEON on Wednesday, September 20 at 11:50 a.m. in the Grand Ballroom of Stouffer's Inn, will feature political satirist Mark Russell of Washington, D.C. Mr. Russell's topic will be "Politics Is A Laughing Matter." KMA's top awards will be presented during the luncheon, as well as the installation of the 1972-73 KMA President.

TECHNICAL EXHIBITS will be on display at Convention Center during the Annual Meeting and will feature a variety of medical products and services. Members and guests will have the opportunity to gain the latest information about recent advances in many medical fields. Thirty-minute intermissions are scheduled during each general and specialty group session.

ALUMNI REUNIONS for the five-year classes of the University of Louisville School of Medicine are planned.

THE WOMAN'S AUXILIARY TO KMA will hold its Golden Anniversary Convention September 18, 19 and 20 at Stouffer's Inn. Business sessions and special entertainment have been planned.

President's Luncheon To Bestow Humor and Honors

The President's Luncheon for physicians and their wives, to be held September 20, will feature an entertaining talk by Mark Russell, political satirist, the presentation of KMA awards and the installation of the 1972-73 President of KMA. This year's Luncheon will be held at 11:50 a.m. on Wednesday in the Grand Ballroom of Stouffer's Inn.

Speaking on the topic, "Politics Is A Laughing Matter," Russell is an entertainer and resident comedian at the Shoreham Hotel in Washington, D.C. A well-known speechmaker, Russell has made two records and has appeared on several television programs.

Preceding the Luncheon address will be the presentation of the Distinguished Service Award and the Kentucky Medical Association Award. Douglas E. Scott, M.D., Lexington, chairman of KMA's Awards Committee, will present the awards.

Lee C. Hess, M.D. Florence, will be installed as KMA President for the upcoming Associational year at the Luncheon. Doctor Hess will be sworn in by David A. Hull, M.D., Lexington, Chairman of the Board of Trustees.

You are urged to purchase your tickets for the President's Luncheon as soon as possible during the Annual Meeting.

U. L. Alumni Plan Reunions During KMA Annual Mtg.

Alumni from eight classes of the University of Louisville School of Medicine are making plans to hold reunions during the 1972 KMA Annual Meeting, according to the U of L Alumni Office.

Chairmen of the five-year classes who are planning individual functions are listed below:

1927—Robertson O. Joplin, M.D., 3364 Medical Arts Building, Louisville, 458-3325.

1932—Charles F. Blankenship, M.D., 3002 Falmouth Road, Louisville. 454-7289.

1937—Charles G. Bryant, M.D., 3357 Medical Arts Building, Louisville, 452-1558.

1942—Chairman To Be Selected.

1947—Edward Warrick, Jr., M.D., 550 Medical Towers South, Louisville, 585-5849.

1952—Burton M. Heine, M.D., 3427 Medical Arts Building, Louisville, 458-6462.

1957—Stanley W. Collis, M.D., 206 Medical Towers Building, Louisville, 583-5015.

1962—Stuart A. Fink, M.D., 4213 Cane Run Road, Louisville, 447-8188.

KEMPAC
Reception — Dinner — Seminar
Monday, September 18, 1972
6:00 p.m
Grand Ballroom, Stouffer's Inn
* * * * * *
CAMPAIGN '72
Walter "Dee" Huddleston (D)
and
Louie B. Nunn (R)
* * * * * *
You are invited to attend and help celebrate the 10th Anniversary of KEMPAC.

Shuttle Buses To Run During 1972 Mtg.

In order to alleviate any transportation problems in getting to and from Convention Center and Stouffer's Louisville Inn during the Annual Meeting this year, shuttle buses are being provided to run continuously between both locations.

All scientific sessions, including afternoon specialty group meetings, will be held at Convention Center beginning at 8:50 a.m. on Tuesday, September 19. The registration booth, technical and scientific exhibits and the Message Center will also be situated in the arena at Convention Center.

Stouffer's Inn, the Headquarters Hotel for the 1972 KMA Annual Meeting, will be the location for the business sessions of the House of Delegates and meetings of the reference committees. The President's Luncheon on Wednesday, September 20, will also be held at the Headquarters Hotel.

MAKE YOUR RESERVATIONS NOW

It is important that you begin making your room reservations as soon as possible for the KMA Annual Meeting, September 19-21. There are hotel and motel accommodations within easy reach of Convention Center. The Stouffer's Louisville Inn will be the Headquarters Hotel this year.

Take This Issue Home To Your Wife

John S. Harter, M.D., Louisville, KMA President, urges you to take this issue of *The Journal* home for your wife to read. Many activities planned during the Annual Meeting will be of interest to her. The program for the 50th Annual Convention of the Woman's Auxiliary to KMA is on page 622.

1972 Annual Meeting Program Summary

The Kentucky Medical Association

September 17, 18, 19, 20 and 21

Louisville

SUNDAY, SEPTEMBER 17

12:30 p.m. Luncheon Meeting, KMA Board of Trustees ..... South Room A, Stouffer's Inn

MONDAY, SEPTEMBER 18

9:00 a.m. First Meeting, KMA House of Delegates ..... Grand Ballroom, Stouffer's Inn
12:30 p.m. Luncheon for Reference Committee Chairmen ..... Ballroom A, Stouffer's Inn
2:00 p.m. Reference Committee Meetings ..... Hunt Room, Sycamore Room, South Rooms A & B, South Room C, Bienville South Room, Tack Room, Grand Ballroom, Stouffer's Inn
6:00 p.m. KEMPAC Reception, Banquet and Seminar ..... Grand Ballroom, Stouffer's Inn

TUESDAY, SEPTEMBER 19

8:00 a.m. Registration ..... Technical Exhibit Hall, Convention Center
8:50 a.m. Opening Ceremonies ..... Scientific Assembly Hall, Convention Center
9:00 a.m. First Scientific Session ..... Scientific Assembly Hall, Convention Center
12:00 noon Board of Trustees Luncheon and Meeting ..... South Room A, Stouffer's Inn
2:00 p.m. Specialty Group Sessions, Convention Center (Eight Specialty Group Sessions will be held simultaneously at this time. KMA members may attend any of these meetings. There will be no General Session at this time. See pages 638-640 in program.)
5:30 p.m. Reception honoring Lee C. Hess, M.D., and Mrs. George W. Schafer ..... Tack Room, Stouffer's Inn

WEDNESDAY, SEPTEMBER 20

9:00 a.m. Second Scientific Session ..... Scientific Assembly Hall, Convention Center
11:50 a.m. President's Luncheon ..... Grand Ballroom, Stouffer's Inn
2:00 p.m. Third Scientific Session ..... Scientific Assembly Hall, Convention Center
4:00 p.m. Orientation Program, New KMA Members ..... Sycamore Room, Stouffer's Inn
4:30 p.m. Meeting, Board of Trustees ..... South Room B, Stouffer's Inn
6:00 p.m. Dinner, Board of Trustees ..... South Room A, Stouffer's Inn
7:00 p.m. Meeting, KMA House of Delegates ..... Grand Ballroom, Stouffer's Inn

THURSDAY, SEPTEMBER 21

9:00 a.m. Fourth Scientific Session ..... Scientific Assembly Hall, Convention Center
12:00 noon Board of Trustees Luncheon and Afternoon Meeting ..... Tack Room, Stouffer's Inn
2:00 p.m. Specialty Group Sessions, Convention Center (Nine Specialty Group Sessions will be held simultaneously at this time. KMA members may attend any of these meetings. There will be no General Session. See pages 642-644 in program.)

A 30-minute intermission has been scheduled during each morning and afternoon Scientific Session for visiting Scientific and Technical Exhibits.

(Full Scientific Program starts on page 638)

The Kentucky Medical Association

SCIENTIFIC PROGRAM

Hawkins Brown Memorial Meeting

Convention Center, Louisville

TUESDAY, SEPTEMBER 19
MORNING SESSION

General Session

John S. Harter, M.D., Louisville
KMA President, Presiding

8:50 Opening Ceremonies

Theme: "RESPIRATORY DISTRESS"

9:00 "The Diagnosis of Fetal Distress"
Edward H. Hon, M.D., Los Angeles, Calif.

9:20 "Current Therapy of Hyaline Membrane Disease"
Thomas K. Oliver, Jr., M.D., Pittsburgh, Pa.

9:40 "Radiologic Evaluation of Respiratory Distress in the Neonate"
Edward B. Singleton, M.D., Houston, Tex.

10:00 Intermission to Visit Exhibits

Theme: "TRAUMA"

10:30 "The Trauma Patient and the Anesthesiologist"
Adolph H. Giesecke, Jr., M.D., Dallas, Tex.

10:50 "Booby Traps in Orthopaedics"
Charles A. Rockwood, Jr., M.D., San Antonio, Tex.

11:10 "A Simplified Approach to the Management of the Burned Child"
Duane L. Larson, M.D., Galveston, Tex.

11:30 Trauma of the Urinary Tract
Victor A. Politano, M.D., Miami, Fla.

TUESDAY, SEPTEMBER 19
AFTERNOON SESSION

Eight Specialty Group Meetings

(The scientific programs of eight specialty groups, beginning at 2 p.m., will feature prominent guest speakers from throughout the country and from Kentucky. All KMA members are invited to attend the specialty group meetings of their choice. There will be no general scientific session at this time.)

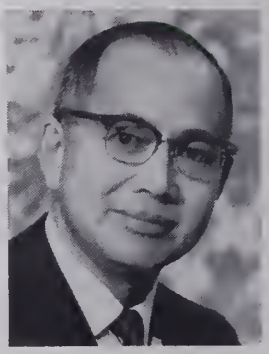
Kentucky Society of Anesthesiologists
Room 207, Convention Center

2:00 "Fluid Therapy in the Resuscitation of the Traumatized Patient"
Adolph H. Giesecke, Jr., M.D., Dallas, Tex.

3:00 Intermission to Visit Exhibits

3:30 Business and Scientific Meeting

EDWARD H. HON, M.D.
Los Angeles, California



Professor of Obstetrics and Gynecology, University of Southern California Medical Center. M.D., 1950, Loma Linda College of Medical Evangelists. Chief, Perinatal Biology Section. Member, American College of Obstetricians and Gynecologists, International Federation of Gynecology and Obstetrics, Society for Gynecologic Investigation, Society for Study of Sterility. Author and co-author of over 100 scientific articles.

THOMAS K. OLIVER, JR., M.D.
Pittsburgh, Pennsylvania



Professor and chairman, Department of Pediatrics, University of Pittsburgh. M.D., 1949, Harvard Medical School. Medical Director, Children's Hospital of Pittsburgh. Official Examiner, American Board of Pediatrics. Editorial Board member, Pediatrics. Member, Committee on the Fetus and Newborn, American Academy of Pediatrics. Fellow, American Academy of Pediatrics. Member, American Thoracic Society, American Association of University Professors.

EDWARD B. SINGLETON, M.D.
Houston, Texas



Clinical Professor of Radiology. M.D., 1946, University of Texas. Director of Radiology, St. Luke's Episcopal and Texas Children's Hospitals. Consultant in Radiology, Lackland Air Force Base. Fellow, American College of Radiology. Member, Radiological Society of North America, Society for Pediatric Radiology, Inter-American Congress of Radiology, Latin American Congress of Pediatrics.

ADOLPH H. GIESECKE, JR., M.D.
Dallas, Texas



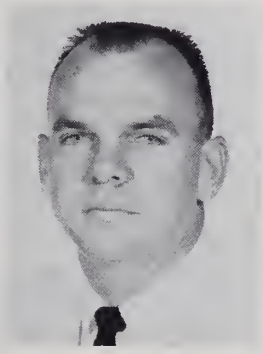
Professor of Anesthesiology, University of Texas Southwestern Medical School. M.D., 1957, University of Texas Medical Branch at Galveston. President, Southern Society of Anesthesiologists. Chairman, Committee for Audio Visual Program, American Society of Anesthesiologists. Fellow, American College of Anesthesiologists. Member, International Anesthesia Research Society, Association of University Anesthetists.

CHARLES A. ROCKWOOD, JR., M.D.
San Antonio, Texas



Professor and chairman, Department of Orthopaedic Surgery, University of Texas Medical School. M.D., 1956, University of Oklahoma. Chairman, Committee on Injuries, American Academy of Orthopaedic Surgeons. American Academy of Orthopaedic Surgeons Representative to AMA Commission on Emergency Medical Services. Member, Orthopaedic Research Society, Association of Bone Joint Surgeons, Society of Military Orthopaedic Surgeons.

DUANE L. LARSON, M.D.
Galveston, Texas



Chief surgeon, Shriners Burn Institute. M.D., 1954, University of Wisconsin Medical School. Associate Professor, Plastic and Maxillofacial Surgery, University of Texas Medical Branch. Member, International Society for Burn Injuries, American Burn Association, American Society of Plastic and Reconstructive Surgery, American Association for Surgery of Trauma, Plastic Surgery Research Council.

VICTOR A. POLITANO, M.D.
Miami, Florida



Professor and chairman, Department of Urology, University of Miami School of Medicine. M.D., 1943, Duke University School of Medicine. Past president, Florida Urological Society. Honorary member, Columbia Urological Association. Fellow, American College of Surgeons. Member, American Confederation of Urology, Pan American Medical Association, American Society of Nephrology, American Association of Genitourinary Surgeons.

Kentucky Chapter, American College of Chest Physicians
Room 104, Convention Center

2:00 Round Table Discussion
"Coronary Artery Disease: Surgical Versus Medical Treatment"
Armond T. Gordon, M.D., Louisville
Ralph Shabetai, M.D., Lexington
Gordon K. Danielson, M.D., Rochester, Minn.
Myron W. Wheat, Jr., M.D., Louisville

3:00 Intermission to Visit Exhibits

3:30 Simultaneous Round Table Conferences
"Blunt Chest Trauma"
Lester R. Bryant, M.D., Lexington
Myron W. Wheat, Jr., M.D., Louisville

"Diagnostic Radiology"
J. T. Ling, M.D., Louisville
C. William Rogers, M.D., Madisonville

"Clinical Cardiology and Electrocardiography"
Armond T. Gordon, M.D., Louisville
Ralph Shabetai, M.D., Lexington

"Tuberculosis: New Developments"
John H. McClement, M.D., New York, N.Y.

Kentucky Obstetrical and Gynecologic Society
Room 204, Convention Center

2:00 "Clinical Value of Fetal Monitoring"
Edward H. Hon, M.D., Los Angeles, Calif.

3:00 Intermission to Visit Exhibits

3:30 Panel Discussion: Fetal and Perinatal Medicine
John W. Greene, Jr., M.D., Lexington
Edward H. Hon, M.D., Los Angeles, Calif.
John T. Queenan, M.D., Louisville
John L. Duhring, M.D., Lexington
Bernard Weisskopf, M.D., Louisville

4:30 Business Meeting

Kentucky Orthopaedic Society
Room 101, Convention Center

2:00 "The Complications of Intracapsular Fractures of the Hip-Aseptic Necrosis"
William K. Massie, Jr., M.D., Lexington

2:30 "Perthes Disease in Eastern Kentucky"
Bernard L. Manale, M.D., Lexington

3:00 Intermission to Visit Exhibits

3:30 "Experiments with the Quadrilateral Cast Brace in Treatment of Fractures of the Femur (QCB)"
Charles A. Rockwood, Jr., M.D., San Antonio, Tex.

4:00 "The Alcoholic Orthopaedic Patient"
O. James Hurt, M.D., Louisville

Kentucky Chapter, American Academy of Pediatrics
Assembly Hall, Convention Center

2:00 "Pathophysiology of Obstructive Airway Disease"
Thomas K. Oliver, Jr., M.D., Pittsburgh, Pa.

2:30 "Cystic Fibrosis"
Glenn R. Stoutt, M.D., Louisville

3:00 Intermission to Visit Exhibits

3:30 "Croup and Bronchiolitis"
Thomas K. Oliver, Jr., M.D., Pittsburgh, Pa.

4:00 "Chronic Infectious Lung Disease"
Linda R. Walters, M.D., Lexington

Kentucky Society for Plastic and Reconstructive Surgery
Room 205, Convention Center

2:00 "Reconstructive Surgery in the Burned Patient"
Duane L. Larson, M.D., Galveston, Tex.

2:30 "Nevi and Melanomas"
J. Thomas Giannini, M.D., Louisville

3:00 Intermission to Visit Exhibits

PROBLEM PRESENTATIONS:

3:30 "Subcutaneous Mastectomy with Breast Augmentation"
Raleigh R. Archer, M.D., Lexington

3:40 "Facial Fractures"
Thomas F. Coats, M.D., Lexington

3:50 "Surgical Treatment of Acne—Review of Surgical Planning"
John C. Weeter, M.D., Louisville

4:00 "Augmentation Mammaplasty; An Office Procedure"
Louis M. Muldrow, M.D., Lexington

4:10 Business Meeting

Kentucky Chapter, American College of Radiology
Room 208, Convention Center

2:00 "Unusual Skeletal Abnormalities Encountered in Pediatric Radiology"
Edward B. Singleton, M.D., Houston, Tex.

3:00 Intermission to Visit Exhibits

3:30 "Orbital Venography"
H. David Rosdeutscher, M.D., Lexington

3:50 "Cholesteotomas of the Middle Ear"
Gerald J. Bailey, M.D., Lexington

4:10 "A-V Malformations of the Cervical Cord"
Guy T. Ellis, III, M.D., Lexington

Kentucky Urological Association
Room 203, Convention Center

2:00 "Urinary Reconstruction in Children"
Victor A. Politano, M.D., Miami, Fla.

3:00 Intermission to Visit Exhibits

3:30 Pyelogram Clinic

4:00 Business Meeting

WEDNESDAY, SEPTEMBER 20
MORNING SESSION

General Session

Carroll H. Robie, M.D., Louisville
KMA Vice-President, Presiding

9:00 "Simple Guides to the Diagnosis and Management of Blood Fat Disorders"
Robert I. Levy, M.D., Bethesda, Md.

9:30 "Do's and Don'ts of Crohn's Disease"
Rupert B. Turnbull, Jr., M.D., Cleveland, Ohio

10:00 Intermission to Visit Exhibits

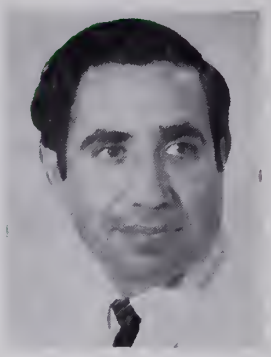
10:30 "Surgical Treatment of Complications of Myocardial Infarction"
Gordon K. Danielson, M.D., Rochester, Minn.

10:50 "Diabetes; Is Glycemic Control Necessary?"
George C. Kyle, M.D., Philadelphia, Pa.

11:20 "Hyperlipidemia and Premature Coronary Disease, Past, Present, and Prospects"
Robert I. Levy, M.D., Bethesda, Md.

11:40 Adjournment for President's Luncheon

ROBERT I. LEVY, M.D.
Bethesda, Maryland



Chief, Lipid Metobolism Bronch ond Clinicol Service, Moleculor Diseose Bronch, Notionol Heort ond Lung Institute. M.D., 1961, Yole University. Heod, Section on Lipoproteins, Moleculor Diseose Branch. Editoriol Boord member, Journal of Lipid Research. Member, American Fedorotion for Clinicol Reseorch, American Heort Association Council on Arteriosclerosis, Americon Society for Clinicol Investigotion, Americon Society for Clinicol Phormacology ond Theropeutics.

RUPERT B. TURNBULL, JR., M.D.
Cleveland, Ohio

Heod, Deportment of Colon ond Rectal Surgery, Clevelond Clinic Foundotion. M.D., 1940, McGill University, Montreol, Conodo. Recipient, A. B. Grohom Aword, Americon Proctologic Society. Fellow, Americon College of Surgeons, Americon Proctologic Society. Founder, North Americon Associotion of Enterostomol Theropists. Member, Americon Surgicol Associotion, Internotionol Societe Surgeons, Royol Society of Medicine of Englond.



GORDON K. DANIELSON, JR., M.D.
Rochester, Minnesota



Associote Professor of Surgery, Moyo Groduote School of Medicine, University of Minnesoto. M.D., 1956, University of Pennsylvonio School of Medicine. Fellow, American College of Cordiology, American College of Chest Physicions, Americon College of Surgeons. Consultont in Surgery, Section on Cordiovosculor and Thoracic Surgery, Moyo Clinic. Member, Americon Associotion for Thorocic Surgery, Internotionol Cordiovosculor Society.

GEORGE C. KYLE, M.D.
Philadelphia, Pennsylvania

Professor of Medicine, University of Pennsylvania. M.D., 1947, University of Pennsylvonio. Fellow, Americon College of Physicions. Past president, Philodelphio Diabetes Research Forum. President, Delowore Volley Diobetes Associotion. Member, Molproctice Review Committee, Americon College of Physicians. Member, Endocrine Society, Americon Diobetes Association.



MARK RUSSELL
Washington, D.C.



Political satirist and entertainer. Resident comedian at the Shoreham Hotel in Washington, D.C. since 1961. Appeared on numerous television network programs and hosted two Washington television shows of his own. Author of several radio and televistan commerciols as well as newspaper columns. Produced two record albums, "The Face On The Senate Floor or Which Way Is The Revolution" and "Up The Potomac Without A Canoe."

ROBERT R. FINCH, D.D.S.
Louisville, Kentucky



Associate Professor and chairman, Department of Oral Pathology, University of Louisville School of Dentistry. D.D.S., 1959, Ohio State University. Assistant Dean for Curriculum Development and Continuing Education. Fellow, American Academy of Oral Pathology. Member, American Association of Cancer Education, American Association of Dental Schools, Eastern Society of Teachers of Oral Pathology.

DON W. PRINTZ, M.D.
Atlanta, Georgia



Chief of Clinical Research for Venereal Disease Branch, Center for Disease Control. M. D. 1966, University of North Carolina School of Medicine. Diplomate, American Board of Dermatology. Fellow, American Academy of Dermatology. Served in gonorrhea control research project in Columbus, Ohio.

KENNETH L. STRATTON, M.D.
New York, New York



Medical Director, New York Telephone Company, M.D., 1935, University of Louisville School of Medicine. Fellow, Aerospace Medical Association, American Industrial Medical Association. Diplomate, American Board of Preventive Medicine. Member, American Academy of Occupational Medicine, American Public Health Association, New York Academy of Medicine.

PRESIDENT'S LUNCHEON

Grand Ballroom, Stouffer's Inn

11:50 a.m.

John S. Harter, M.D., Louisville
KMA President, Presiding

Invocation

Recognition

Awards Presentation

Douglas E. Scott, M.D., Lexington, Chairman
KMA Awards Committee

"Politics Is A Laughing Matter"
Mark Russell, Washington, D.C.

Installation of New KMA President

WEDNESDAY, SEPTEMBER 20
AFTERNOON SESSION

General Session

Robert N. McLeod, Jr., M.D., Somerset
Vice-Chairman, KMA Board of Trustees, Presiding

2:15 "Diabetes and Pregnancy"
George C. Kyle, M.D., Philadelphia, Pa.

2:45 "The Mouth and Systemic Disease"
Robert R. Finch, D.D.S., Louisville

3:05 Intermission to Visit Exhibits

3:35 "Venereal Disease—Can It Be Controlled?"
Don W. Printz, M.D., Atlanta, Ga.

3:55 To Be Announced

4:15 "Treatment of Complicated Diverticulitis"
Rupert B. Turnbull, Jr., M.D., Cleveland, Ohio

THURSDAY, SEPTEMBER 21
MORNING SESSION

General Session

David A. Hull, M.D., Lexington
Chairman, KMA Board of Trustees, Presiding

9:00 "The Health Inventory—Multiphasic Health Testing"
Kenneth L. Stratton, M.D., New York, N.Y.

9:20 "Story of William Beaumont—The Discovery of Gastric Digestion"
Edward R. Woodward, M.D., Gainesville, Fla.

9:40 "Para-Psychology, Its Implications for Medicine"
Montague Ullman, M.D., Brooklyn, N.Y.

10:00 Intermission to Visit Exhibits

Theme: "ATHEROSCLEROSIS"

10:30 "The Role of Plasma Lipoproteins in the Pathogenesis of Atherosclerosis"
Harvey F. Watts, M.D., Philadelphia, Pa.

10:50 "Factors in Coronary Mortality"
Oglesby Paul, M.D., Chicago, Ill.

11:10 "Diabetes Mellitus: Newer Concepts in Diagnosis and Treatment, I"
Edgar A. Haunz, M.D., Grand Forks, N. Dak.

11:30 "Cutaneous Xanthomatoses"
Robert R. Kierland, M.D., Rochester, Minn.

THURSDAY, SEPTEMBER 21
AFTERNOON SESSION

Nine Specialty Group Meetings

(Nine specialty groups will meet at 2 p.m. with outstanding speakers appearing on the programs. All KMA members are invited to these meetings. No general session will be held.)

Kentucky Dermatological Society
General Hospital

2:00 **Clinical Case Presentations**
Smith H. Gibson, M.D., Covington, Moderator

3:00 **Intermission to Visit Exhibits**

3:30 **General Discussion of Cases Presented**
Robert R. Kierland, M.D., Rochester, Minn.

Kentucky EEN&T Society
Room 205, Convention Center

To Be Announced

Kentucky Chapter,
American Academy of Family Physicians
Assembly Hall

2:00 **"Diabetes Mellitus: Newer Concepts in Diagnosis and Treatment, II"**
Edgar A. Haunz, M.D., Grand Forks, N. Dak.

2:30 **"The Department of Family Practice at the University of Kentucky—When-What-How-Ideals-Progress"**
Ben F. Roach, M.D., Lexington

3:00 **Intermission to Visit Exhibits**

3:30 **"The Department of Family Practice at the University of Louisville—When-What-How-Ideals-Progress"**
William P. VonderHaar, M.D., Louisville

4:00 **"Practical Approach to Transfusion Reaction"**
Curtis L. Songster, M.D., Louisville

Kentucky Industrial Medical Association
Room 203, Convention Center

2:00 **"Industry and the Community Drug Problem"**
Kenneth L. Stratton, M.D., New York, N.Y.

Kentucky Chapter,
American College of Physicians
Room 204, Convention Center

2:00 **"Treatment of Tuberculosis in a General Hospital, 1972"**
David H. Bizot, M.D., Louisville

2:30 **"Problems and Prognosis in Kidney Transplantation, 1972"**
Denis G. Martin, M.D., Louisville

3:00 **Intermission to Visit Exhibits**

3:30 **"Sudden Death"**
Oglesby Paul, M.D., Chicago, Ill.

4:00 **"Coronary Heart Disease, 1972"**
Thomas V. Inglesby, M.D., Louisville
Robert R. Goodin, M.D., Louisville

EDWARD R. WOODWARD, M.D.
Gainesville, Florida



Professor and chairman, Department of Surgery, University of Florida College of Medicine. M.D., 1942, University of Chicago School of Medicine. Recipient, Arthur H. Shipley Award of the Southern Surgical Association, 1970. Editorial Board member, American Journal of Digestive Diseases, American Surgeon, Surgery. Editor, American Lectures in Gastroenterology. Author and co-author of over 150 publications.

MONTAGUE ULLMAN, M.D.
Brooklyn, New York



Director, Department of Psychiatry, Maimonides Medical Center. M.D., 1938, New York University College of Medicine. Director, Community Mental Health Center. Professor of Psychiatry, State University of New York. Charter Fellow, Academy of Psychoanalysis. Fellow, American Psychiatric Association. 1st Vice-President, American Society for Psychiatric Research. Member, editorial board, Journal of Consciousness and Creativity.

HARVEY F. WATTS, M.D.
Philadelphia, Pennsylvania



Professor of Pathology, Temple University Medical School. M.D., 1948, Temple University Medical School. Director, Laboratory of Electron Microscopy, Temple University. Director, Department of Pathology, Episcopal Hospital, Philadelphia.

OGLESBY PAUL, M.D.
Chicago, Illinois



Professor of Medicine, Northwestern University College of Medicine. M.D., 1942, Harvard Medical School. Fellow, American College of Physicians, American College of Chest Physicians, Royal Society of Medicine. Editorial Board member, Circulation. Associate Editor, Diseases of the Chest. Member, Board of Directors, International Cardiology Foundation. Member, U.S.-United Kingdom Board on Cardiorespiratory Diseases. Secretary-Treasurer, Chicago Society of Internal Medicine.

EDGAR A. HAUNZ, M.D.
Grand Forks, North Dakota



Professor and chairman, Department of Medicine, University of North Dakota School of Medicine. M.D., 1943, University of New York School of Medicine at Buffalo. Fellow, American College of Physicians. Past chairman, Board of Governors, American Diabetes Association. Editorial Board member, Cardiovascular and Metabolic Disease, Clinical Medicine. Author, Section on Diabetes Mellitus, "1972 Current Therapy." Past president, North Dakota Blue Shield.

ROBERT R. KIERLAND, M.D.
Rochester, Minnesota



Professor of Dermatology, Mayo Graduate School of Medicine, University of Minnesota. M.D., 1933, University of Minnesota. Past president, American Academy of Dermatology, American Dermatological Association, Dermatology Foundation. Chief Editor, Archives of Dermatology. Member, International Society of Tropical Dermatology, Society for Investigative Dermatology. Honorary member of numerous foreign dermatological societies.

Kentucky Society of Pathologists
Room 208, Convention Center

2:00 "Basic Aspects of the Pathogenesis of Human Atherosclerosis"
Harvey F. Watts, M.D., Philadelphia, Pa.

3:00 Intermission to Visit Exhibits

3:30 "Quality Assurance—QAS and Regional Pathology Programs"
Edward J. Stygar, Jr., Chicago, Ill.
Guy T. Haven, M.D., Omaha, Neb.

Kentucky Association of Public Health Physicians
Room 207, Convention Center

2:00 "VD: Management of That Problem Patient"
Don W. Printz, M.D., Atlanta, Ga.

3:00 Intermission to Visit Exhibits

3:30 Business Meeting

Kentucky Psychiatric Association
Room 101, Convention Center

2:00 "Para-Psychology: Implications for Psychiatry"
Montague Ullman, M.D., Brooklyn, N.Y.

2:45 Discussion

3:00 Intermission to Visit Exhibits

3:30 Business Meeting

Kentucky Chapter, American College of Surgeons
Room 104, Convention Center

2:00 "Logic in Clinical Decision-Making"
Carl Knutson, M.D., Louisville

2:30 "The Utility of Thoracic Duct Fistula As A Clinical and Laboratory Surgical Tool"
Roland Girardet, M.D., Louisville

3:00 Intermission to Visit Exhibits

3:30 "The Lower Esophageal Sphincter and Its Relationship to Esophagitis"
Edward R. Woodward, M.D., Gainesville, Fla.

4:00 "Management of Severe Thoracic Trauma"
Gerald Temes, M.D., Louisville

Hawkins Brown, M.D., Honored At 1972 Annual Meeting

The 1972 KMA Annual Meeting will honor the 1892 President of the Association by officially entitling this year's Meeting, "The Hawkins Brown Memorial Meeting."



Doctor Brown

Originating in 1935, either a past president of KMA or a distinguished physician that has contributed to Kentucky medicine is honored during the Annual Meeting.

KMA Historian, Eugene H. Conner, M.D., Louisville, has written a biography of Doctor Brown and it will appear in the Annual Meeting program booklet which will be distributed at the Meeting September 19-21.

The Kentucky Medical Association acknowledges with appreciation the program support received from the A. H. Robins Company, Pennant Litho and Letter Shop and Stouffer's Louisville Inn.

☆ ☆ ☆ ☆ ☆

REGISTRATION INFORMATION

A Registration Booth will be located in the north end of the Convention Hall (in the Technical Exhibit Hall) throughout the Annual Meeting. The booth will be open at 8 a.m. Tuesday, Wednesday and Thursday, September 19-21.

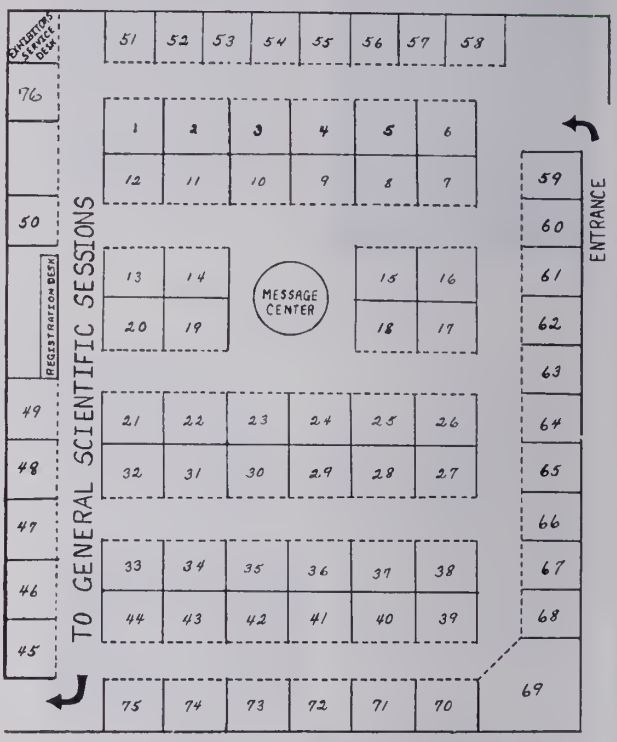
Please wear your badge at all times while attending the meeting.

Technical Exhibits To Feature Latest Developments In Medical Techniques and Information

You will be presented with a concise and composite picture of the latest developments in medical techniques and information when you enter the technical exhibit hall at Convention Center this year during the KMA Annual Meeting. Exhibitors will be available to discuss with you the latest discoveries and innovations in their products or the most up-to-date advances in their services.

All exhibits have been prepared carefully and skillfully to appeal to you, the physician, and have been geared to your special interests as a practitioner. You will have a unique opportunity to secure a vast amount of knowledge and information conveniently and effortlessly in a short period of time.

In order to give every KMA member and guest ample time to take advantage of this splendid opportunity, 30-minute intermissions for visiting the exhibits have been scheduled during each general and specialty group session.



Floor Plan of Technical Exhibits

TECHNICAL EXHIBITORS

Abbott Laboratories (10)
American Medical Facilities Corporation (19)
Automated Management Systems (36)
Biomedical Trends (43)
Blue Cross-Blue Shield, Kentucky (40)
Bristol Laboratories (24)
Burroughs Wellcome Company (6)
Burton, Parsons & Company, Inc. (32)
CIBA Pharmaceutical Company (61)
Crocker-Fels Co., Inc. (74)
Dairy Council of Kentucky & Southern Indiana, Inc. (65)
Dictaphone Corporation (62)
Eaton Laboratories (49)
Emko Company (38)
Encyclopaedia Britannica, Inc. (21)
Glencoe Research, Inc. (47)
Guild of Prescription Opticians of Kentucky (9)
Hancock, John, Life Insurance Company (68)
Hoechst Pharmaceuticals, Inc. (3)
International Clinical Laboratories (22)
Lakeside Laboratories, Inc. (33)
Lederle Laboratories (8)
Lee, A. P., Agency (66)
Lilly, Eli & Company (7)
Lippincott, J. B., Company (4)
Lorillard (27)
Louisville Surgical and Kay Surgical (15)
Malkin Instrument Company (17)
Medical Protective Company (63)
Medtronic Sales Company (48)
Merck Sharp & Dohme (26)
Metropolitan Life Insurance Company—Medicare Office (29)
Meyer Laboratories, Inc. (46)
Mutual Benefit Life Insurance Company (56)
Ortho Pharmaceutical Corporation (14)
Parke, Davis & Company (58)
Professional Corporation Benefits Company (53)
Poythress, William P. & Company, Inc. (50)
Ransdell Surgical, Inc. (52)
Revere Companies, Paul (39)
Reynolds, R. J., Tobacco Company (1)
Robins, A. H., Company (16)
Sandoz Pharmaceuticals (23)
Saunders, W. B., Company (13)
Schering Laboratories (5)
Scroggins, Clayton L., Associates (75)
Searle, G. D., & Company (18)
Sheryl Pharmaceuticals, Inc. (47)
Smith, Miller & Patch, Inc. (12)
Sound Systems (51)
Squibb, E. R. & Sons, Inc. (44)
Stuart Pharmaceuticals, Div. of ICI America, Inc. (20)
Syntex Laboratories (70)
Tele-Business Products Company (64)
USV Pharmaceutical Corporation (45)
Wocher, Max & Son, Company (60)
Wyeth Laboratories (59)
Zimmer Manufacturing Company (57)

ORGANIZATION SECTION

AMA Acts On 189 Items, Names President-Elect

Delegates to the 121st Annual Convention of the American Medical Association held in San Francisco, June 18-22, meeting for a total of 17 hours and 20 minutes, acted on 59 reports and 130 resolutions. Russell B. Roth, M.D., Erie, Pa., was named President-Elect.



Doctor Roth

An eloquent plea by new President Carl A. Hoffman, M.D., Huntington, W. Va., that unionization of medicine be rejected; historic action in regard to graduate medical education, and approval of representation for medical students in the AMA House of Delegates highlighted the Annual Convention. In addition, results of the first AMA membership poll were presented to delegates—showing an overwhelming number of physicians endorsing AMA efforts to retain the basic principles of private practice in any government health program that might be enacted.

In his inaugural address, Doctor Hoffman noted that factionalism in the profession assumes a number of forms but "one form requires special comment."

"The cry for unionism is being raised in our profession as never before. There is no doubt that trade unionism has been an effective and valuable social instrument in our nation. But is it a proper activity for physicians to engage in?"

It is not, Doctor Hoffman said, because "unionism seeks its objectives through group power—and it achieves its power by carefully controlled conformity. This is the very objection we as a profession have raised against government-controlled medicine. The source of power of unionism lies in its ultimate weapon—the strike. A strike, even the threat of a strike, is a threat to withhold services. It is, therefore, a violation of medical ethics."

Speaker of the House since 1969, Doctor Roth was chosen as the 128th President of AMA. He received his M.D. degree from Johns Hopkins University School of Medicine in 1939. He is certified by the American Board of Urology.

Long active in Association affairs, Doctor Roth has served on many AMA committees, and is a past chairman of the AMA Council on Medical Service. He has also been chairman of the Pennsylvania Medical Society's Board of Trustees, a member of its Commission on Cancer, and speaker of its House of Delegates.

Doctor Roth, an author and a lecturer on urological subjects, belongs to the American Urological Association and is a Fellow of the American College of Surgeons and the Academy of International Medicine.

Others elected or re-elected to AMA offices are: Vice President, Norman H. Gardner, M.D., Conn.; Speaker of the House, J. Frank Walker, M.D., Ga.; Vice-Speaker of the House, Tom E. Nesbitt, M.D., Tenn.; Trustees, Jere W. Annis, M.D., Fla.; Burt L. Davis, M.D., Calif., Robert B. Hunter, M.D., Wash., and Max H. Parrott, M.D., Ore.

KMA & Ky. Physicians Mutual Hold Joint Mtg. of Boards

More than 65 individuals assembled on Thursday, July 6, when a joint meeting of the KMA Board of Trustees and Kentucky Physicians Mutual Board of Directors was held in the Assembly Hall of the new addition to the KMA Headquarters Office.

This "first ever" joint meeting of the two Boards was designed to accelerate an exchange of information and to strengthen liaison ties. The all-day program was highlighted with a presentation by Ned Parish, Chicago, President of the National Association of Blue Shield Plans.

It is anticipated that this type of meeting may be held on an annual basis with perhaps more involvement from the county medical societies.



Lee C. Hess, M.D., Florence, KMA President-Elect, moderates a portion of the joint meeting of the KMA Board of Trustees and Kentucky Physicians Mutual Board of Directors held July 6 in the Assembly Hall of the KMA Headquarters Office.

KMA Promotes Bill Applegate To Asst. Executive Director

On July 1, William T. Applegate, Louisville, became Assistant Executive Director of the Kentucky Medical Association. Applegate was employed as Administrative Assistant in 1968, became Executive Assistant six months later and has been serving as Assistant to the Executive Director since July, 1971.



Mr. Applegate

In his new position, Applegate will assume increased responsibilities in the overall operations of the Association and its staff. A 1966 graduate of the University of Louisville, he is a member of the Louisville Jaycees, Louisville Organization Executives Council, the American Association of Medical Society Executives and the Professional Convention Managers Association.

Revised Information Presented On Voter Registration Laws

With 1972 being a Presidential Election year, information concerning revised voter registration laws is most pertinent at this time. The special session of the Kentucky General Assembly held in June, 1972, revised considerably the laws pertaining to voter registration in Kentucky.

The deadline for registering to vote prior to the 1972 General Election is October 10, 1972, or approximately 30 days prior to the election. To be eligible to vote in Kentucky, you must have lived in your precinct, in your county and in the State for 30 days.

If you move from one precinct to another within the city or within the county, all you need to do is call the voter registration office and change your address. However, if you move from the city to the county or from one county to another county, you have to register again.

Besides voting for a President and Vice-President, Kentuckians will elect one U. S. Senator and seven U. S. Representatives.

Be sure to urge your family, friends and office staff to **register** and **vote** in this year's election.

Nurses Training Program Scheduled for Oct. 2-28

The Sixth Coronary Care Nurses Training Program, sponsored by the King's Daughters Hospital, Ashland, is set for October 2-28, 1972. The four week program, conducted by H. B. McWhorter, M.D., Ashland, ICCU Director, is an intensive 168-hour course.

Limited to registered nurses and qualified licensed practical nurses, the program will have a maximum enrollment of 25. Applications will be accepted until September 22. For further details contact the Director of Nursing Service, King's Daughters Hospital, 22nd and Lexington Avenue, Ashland, Kentucky 41101.

KMGA Plans Tournament for September 21

The annual fall tournament of the Kentucky Medical Golf Association will be held Thursday, September 21, at the Harmony Landing Country Club, Louisville.

Members of KMGA may tee off anytime on that day and a limited number of members may play on an alternate date by making arrangements with the golf pro at the Country Club at 228-8316.

A banquet and business meeting will be held at the club at 6 p.m. on September 21. Assessment for the tournament is $15.00.

Any physician interested in joining KMGA and playing in the fall tournament should complete the following form:

MEMBERSHIP APPLICATION

To: Kentucky Medical Golf Association
Donald L. Ware, M.D., Secretary-Treasurer
750 Medical Towers South
Louisville, Kentucky 40202

Date _____

Gentlemen:

Please enroll me as a member of KMGA. I hereby agree to abide by the charter and by-laws as printed. Enclosed is my check for $10.00 to cover enrollment and annual dues for 1972. I am enclosing $15.00 for assessment for the 1972 Tournament. (Make check payable to Kentucky Medical Golf Association.)

Name _____ M.D. Date of Birth _____

Address _____ Club Affiliation _____

_____ Zip Code Current Handicap _____

American College of Cardiology Grants Fellows to 2 Ky. M.Ds

Two Kentucky doctors have been granted Fellowships in the American College of Cardiology (ACC), the national medical society for specialists in cardiovascular diseases. The doctors are among a group of 193 from United States and Canada recently admitted to the College's highest membership classification.

Robert N. Class, M.D., Lexington, the ACC Governor for Kentucky, listed the new Fellows as: Howard B. McWhorter, M.D., Ashland and David S. Nightingale, M.D., Louisville.

The doctors, as well as the other new Fellows, have fulfilled stringent membership requirements based on several years of practice and specialty certification. This effort, according to Doctor Class, culminates in their being considered by colleagues in their communities as specialists or consultants in cardiovascular diseases.

Occupational Health Congress Planned by AMA, Sept. 11-12

The American Medical Association Council on Occupational Health will present the 32nd Annual Congress on Occupational Health on September 11-12, 1972 at the Drake Hotel in Chicago.

The program, which will begin at 9 a.m. on Monday, September 11, will feature many outstanding speakers from government and industry. Carl A. Hoffman, M.D., AMA President, will address the group at the opening session.

Items of discussion for the two-day event include multiphasic health testing, nuclear reactors, group practice in occupational medicine and the role of labor unions in occupational safety.

The Congress program is acceptable for 12 elective hours by the American Academy of Family Physicians.

ACP Announces 3 Ky. Fellows

The American College of Physicians has announced that three Louisville physicians have been made Fellows of the society which represents specialists in internal medicine and related fields. **Robert R. Goodin, M.D., Paul C. Grider, M.D. and Donald H. Mosley, M.D.** were recently selected along with 263 other physicians in the United States and Canada as Fellows.

Cardiology Symposium Set Sept. 9

A Symposium on Cardiology has been scheduled for Saturday, September 9, at the King's Daughters Hospital, Ashland. Sponsored by the Kentucky and Boyd County Heart Association, the theme for this one-day meeting is "Present Trends in Acute Coronary Care." Registration begins at 8:45 a.m., EDT.



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In Memoriam

GERALD HART, M.D.
Louisville
1913-1972

Gerald Hart, M.D., 58, a Louisville surgeon and general practitioner, died on May 23. He was president of the board and secretary of the medical staff at Red Cross Hospital in Louisville.

A graduate of Meharry Medical College, Nashville, Doctor Hart was a member of the Falls City and Jefferson County medical societies.

THOMAS I. CAMPBELL, M.D.
Lebanon
1882-1972

Thomas I. Campbell, M.D., died on May 25 at the age of 90. A retired general practitioner, Doctor Campbell was a 1907 graduate of the University of Louisville School of Medicine. Associated with the Marion County Health Department, he was a member of the Kentucky and American medical associations.

ADAM G. OSBORNE, M.D.
Pikeville
1887-1972

A general practitioner for over 47 years, Adam G. Osborne, M.D., 85, died June 20 in Pikeville. A 1916 graduate of the University of Louisville School of Medicine, Doctor Osborne began his medical practice in the mining camps of Virgie and Jenkins. In 1963 he received the KMA Outstanding General Practitioner Award for his contribution to medicine.

He was instrumental in forming the Pikeville Clinic and had served the Pike County Medical Society in many capacities. He also belonged to the Kentucky and American medical associations.

SHELBY G. BALES, M.D.
Elizabethtown
1907-1972

Shelby Garnett Bales, M.D., 64, died on June 22 after an extended illness. A 1935 graduate of Northwestern University Medical School, Doctor Bales practiced medicine in Elizabethtown for 31 years and had served 4½ years as a flight surgeon during World War II. He belonged to the Hardin County, Kentucky and American medical associations.

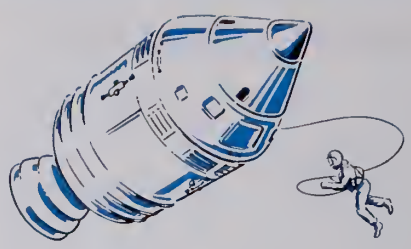


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Maternal Mortality Page

(Continued from Page 581)

sometimes lifesaving, but the accurate diagnosis is extremely difficult to make before death occurs. One unusual feature of this case is the fact that the membranes were apparently intact. A classic paper concerning this entity appears in the *American Journal of Obstetrics and Gynecology,* Vol. 66, 465, 1953, by Reid, D. E., Weiner, A. E., and Roby C. C. Perhaps family planning with proper conception control would have prevented this death.

Retroperitoneal Hemorrhage Sklerov and Hellebusch

(Continued from Page 603)

9. Reiter, M. D., Retroperitoneal Hemorrhage Simulating Acute Abdominal Lesions during Dicumarol Therapy: *W. Va. M. J.,* 52:205, 1956.
10. Hodin, E. and Tulsi, D.: Spontaneous Retroperitoneal Hemorrhage Complicating Anticoagulant Therapy. *Ann. Surg.,* 170:848, 1969.
11. Kaden, W. S. and Friedman, E. A.: Obstructive Uropathy Complicating Anticoagulant Therapy. *New Eng. J. Med.,* 265:-283, 1961.
12. Klingensmith, W.: Surgical Implications of Hemorrhage during Anticoagulant Therapy. *Surg., Gynec. & Obst.,* 125:-1333, 1967.
13. Cerny, J. C. and Scott, T.: Non-idiopathic Retroperitoneal Fibrosis. *J. Urol.,* 105-49, 1971.
14. Mobin-Uddin, K.: Personal Communication.

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SEPTEMBER

9 Symposium on Cardiology, sponsored by Kentucky and Boyd County Heart Association, King's Daughters Hospital Auditorium, Ashland

SEPTEMBER

19-21 KMA ANNUAL MEETING, Convention Center and Stouffer's Louisville Inn

OCTOBER

2-28 Coronary Care Nurses Training Program, King's Daughters Hospital, Ashland

21-22 Scientific Seminar, Kentucky Academy of Family Physicians, Park Mammoth Resort, Park City

NOVEMBER

2-3 Sixth Annual Newborn Symposium, "Infections in the Newborn," Department of Pediatrics, University of Louisville, Health Sciences Center Auditorium, Louisville

IN SURROUNDING STATES

SEPTEMBER

6 Postgraduate course, "General Anesthesia, Dentistry and the Law," Cleveland Clinical Educational Foundation, Cleveland

6-8 Annual Cancer Chemotherapy Conference, University of Wisconsin, Madison

9 Postgraduate program, "Industrial Injuries of the Hand," Cori Auditorium, Washington University School of Medicine, St. Louis

11-12 AMA Annual Congress on Occupational Health, Drake Hotel, Chicago

20-23 Annual meeting, American Thyroid Association, Inc., Drake Hotel, Chicago

23-27 Annual meeting, American Academy of Family Physicians, Hilton Hotel, New York City

OCTOBER

2-6 Annual clinical congress, American College of Surgeons, Fairmont Hotel, San Francisco

14-19 Annual meeting, American Academy of Pediatrics, Hilton Hotel, New York City

23-26 Annual meeting, American College of Chest Physicians, Denver Convention Center, Denver

24-26 National Conference of State Medical Association Representatives on Continuing Medical Education, Ambassador Hotel, Chicago

27-28 Tennessee-Kentucky Regional Meeting, American College of Physicians, Sheraton Motor Inn, Memphis

NOVEMBER

13-16 Annual meeting, Southern Medical Association, New Orleans

13-16 Scientific Assembly, Interstate Postgraduate Medical Association, Washington-Hilton Hotel, Washington, D.C.

ANNUAL MEETING DETAILS

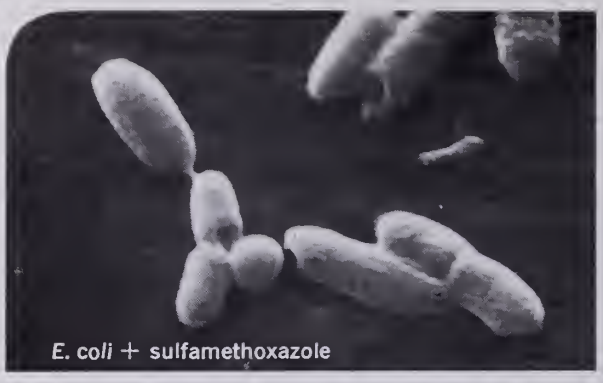
(see pages 623-644)

Encounter under the Scanning Electron Microscope



SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.









Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,[1-3] strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."[2]

References:

1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971.
2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother., 1*:164, 1972.
3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in acute, recurrent or chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis,* and, less frequently, *Proteus vulgaris*) and in the absence of obstructive uropathy or foreign bodies.

***Note:* Since *in vitro* sulfonamide sensitivity tests are not always reliable, carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media of patients receiving sulfonamides. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents, including sulfonamides, especially in chronic or recurrent urinary tract infections.**

Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently abo this level.

Contraindications: Sulfonamide hypersensitivity; infants le than 2 months of age (except adjunctively with pyrimethamine congenital toxoplasmosis); pregnancy at term and during nursi period.

Warnings: Safe use in pregnancy has not been established, a teratogenicity potential has not been thoroughly investigated. S fonamides will not eradicate or prevent sequelae to group A strep coccal infections, *i.e.*, rheumatic fever, glomerulonephritis. Deat from hypersensitivity reactions, agranulocytosis, aplastic anem and other blood dyscrasias have been reported; early clinical sig such as sore throat, fever, pallor, purpura or jaundice may indica serious blood disorders. Complete blood counts and urinalysis wi careful microscopic examination are recommended frequently du ing sulfonamide therapy. Clinical data are insufficient on prolong or recurrent therapy in chronic renal diseases of children und 6 years.

Encounter in Clinical Practice

Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms often implicated in acute nonobstructed pyelonephritis and cystitis.

Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in both the blood and urine.

B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often respond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents, including sulfonamides, especially in chronic or recurrent u.t.i.

Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

In nonobstructed cystitis and pyelonephritis due to susceptible organisms

Gantanol®
(sulfamethoxazole)
Basic Therapy

Precautions: Use with caution in patients with impaired renal hepatic function, severe allergy, bronchial asthma and in glucose-phosphate dehydrogenase-deficient individuals. In the latter, dose-ated hemolysis may occur. Maintain adequate fluid intake to event crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* agranulocytosis, aplastic emia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, poprothrombinemia and methemoglobinemia; *allergic reactions:* thema multiforme (Stevens-Johnson syndrome), skin eruptions, dermal necrolysis, urticaria, serum sickness, pruritus, exfoliative rmatitis, anaphylactoid reactions, periorbital edema, conjunctival d scleral injection, photosensitization, arthralgia and allergic myo-rditis; *gastrointestinal reactions:* nausea, emesis, abdominal pains, patitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* headache, peripheral neuritis, mental depression, convul-ns, ataxia, hallucinations, tinnitus, vertigo and insomnia; and *scellaneous reactions:* drug fever, chills, toxic nephrosis with oli-ria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age, except adjunctively with pyrimethamine in congenital toxoplasmosis. Usual dosage is as follows:

Adults—2 Gm (4 tabs or teasp.) initially, then 1 Gm (2 tabs or teasp.) *b.i.d.* or *t.i.d.* depending on severity of infection. *Children*—0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, followed by 0.25 Gm/20 lbs (½ tab or teasp.) *b.i.d.* Maximum dose for children should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

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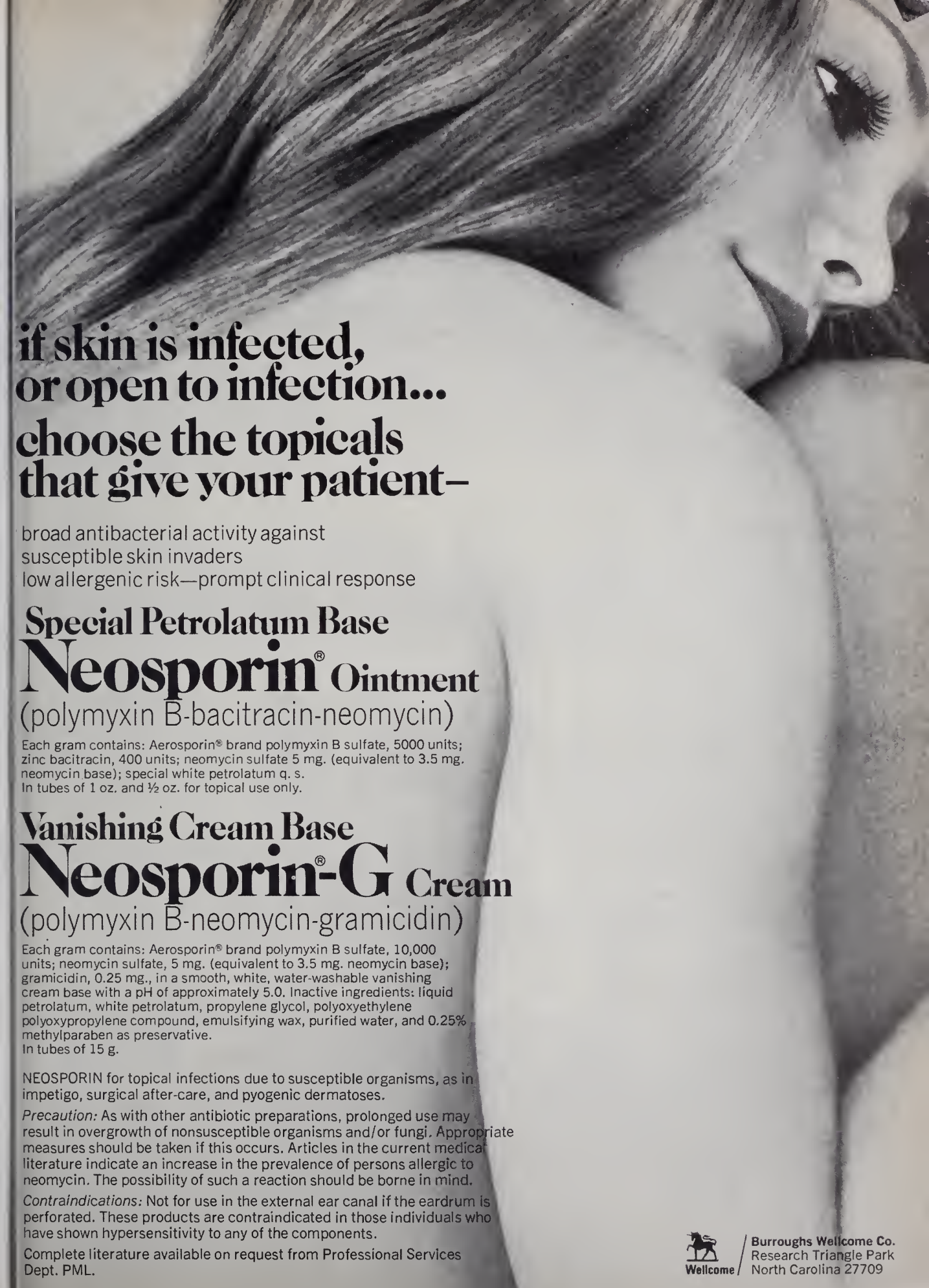
It is financing promising pilot programs such as mobile health vans in Chicago's slums, a drug abuse center in Harlem and a Medex program in Washington state.

The AMA does all these things—and more—for the public health. With your support, we can do even more. Find out more about what the AMA does for the public and you. Send for the pamphlet, "The AMA and the American Doctor: Sharing a Common Goal." Write: Dept. DW, at the address below.

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susceptible skin invaders
low allergenic risk—prompt clinical response

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(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 5000 units; zinc bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

Vanishing Cream Base
Neosporin®-G Cream
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin® brand polymyxin B sulfate, 10,000 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base); gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing cream base with a pH of approximately 5.0. Inactive ingredients: liquid petrolatum, white petrolatum, propylene glycol, polyoxyethylene polyoxypropylene compound, emulsifying wax, purified water, and 0.25% methylparaben as preservative.
In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is perforated. These products are contraindicated in those individuals who have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services Dept. PML.

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North Carolina 27709



When you select this familiar antibiotic for IV infusion you have available a broad dosage rang that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections. In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomyc hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water But when 4 grams or more per day is given, Lincocin should be diluted in n less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

fections caused by susceptible strains
pneumococci, streptococci, and
phylococci, including penicillin-
sistant strains. Staphylococcal strains
sistant to Lincocin (lincomycin
drochloride, Upjohn) have been
covered. Before initiating therapy,
lture and susceptibility studies should
performed. Lincocin has proved
luable in treating patients hyper-
nsitive to penicillin or cephalosporins,
ce Lincocin does not share
tigenicity with these compounds.
wever, hypersensitivity reactions
ve been reported, some of these in
tients known to be sensitive to
nicillin.

ell tolerated at infusion site: Lincocin
ravenous infusions have not
oduced local irritation or phlebitis,
en given as recommended. Lincocin
usually well tolerated in patients who
hypersensitive to other drugs.
vertheless, Lincocin should be used
utiously in patients with asthma or
nificant allergies.

patients with impaired renal function,
recommended dose of Lincocin
ould be reduced to 25—30% of
dose for patients with normal
lney function. Its safety in
gnant patients and in infants
s than one month of age has
t been established.

ncocin may be used with other
timicrobial agents: Since Lincocin
table over a wide pH range, it is
table for incorporation in
ravenous infusions; it also may be
administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



72 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatm
Skin and mucous membranes—Skin ras
urticaria, vaginitis, and rare instances of
foliative and vesiculobullous dermatitis h
been reported. *Liver*—Although no direc
lationship to liver dysfunction is establis
jaundice and abnormal liver function
(particularly serum transaminase) have b
observed in a few instances. *Cardiovasc*
—Instances of hypotension following pa
teral administration have been repor
particularly after too rapid IV adminis
tion. Rare instances of cardiopulmonary
rest have been reported after too rapid
administration. If 4.0 grams or more ad
istered IV, dilute in 500 ml of fluid
administer no faster than 100 ml per h
Special senses—Tinnitus and vertigo h
been reported occasionally. *Local react*
—Excellent local tolerance demonstrate
intramuscularly administered Linco
(lincomycin hydrochloride). Reports of
following injection have been infrequ
Intravenous administration of Lincoci
250 to 500 ml of 5% glucose in dist
water or normal saline has produced
local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *500*
Capsules—bottles of 24 and 100. *St*
Solution, 300 mg per ml—2 and 10 ml v
and 2 ml syringe. *Syrup, 250 mg per 5*
—60 ml and pint bottles.

*For additional product information, con
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MED B-6-S (KZL-7) JA71-1

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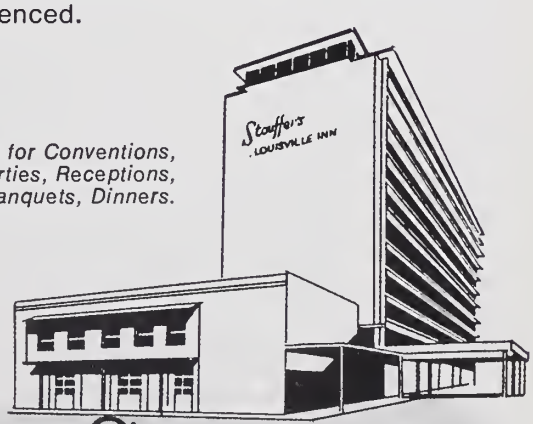
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Librium® and (chlordiazepoxide HCl) concomitant use

Librium (chlordiazepoxide HCl) is used as adjunctive antianxiety therapy concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, antihypertensive agents, diuretics, anticholinergics and antacids.

Antianxiety effectiveness: Demonstrated in a broad range of psychologic and physical dysfunctions; indicated when reassurance and counseling are not enough and until, in the physician's judgment, anxiety has been reduced to tolerable, appropriate levels.

Effect on mental acuity: Usually minimal on proper maintenance dosage.

Safety: An excellent clinical record. In general use, the most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated.

in relief of clinically significant anxiety

Librium®
(chlordiazepoxide HCl)

5-mg, 10-mg, 25-mg capsules up to 100 mg daily in severe anxiety

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Indicated when anxiety, tension and apprehension are significant components of the clinical profile.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Supplied: Librium® capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

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VOLUME 70 SEPTEMBER 1972 NUMBER 9

The Journal of The KENTUCKY Medical Association



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KMA 1972 ANNUAL MEETING
September 19-21
Convention Center, Louisville


The negative power of clinically significant anxiet
in angina pectoris...
This man feels he is living
on borrowed time.

During anginal attacks, patients may suffer intense apprehension. More frequently, however, they experience a continuing sense of less severe but nonetheless disproportionate anxiety.

Reduction of such clinically significant anxiety is important, since undue emotional stress may precipitate further anginal episodes.

Adjunctive Librium (chlordiazepoxide HCl) may be especially suitable for relief of clinically significant anxiety and emotional tension in anginal patients because of its generally prompt therapeutic effectiveness and wide margin of safety. In a recent double-blind randomized study,* Librium (chlordiazepoxide HCl) was administered for relief of moderate anxiety in 20 anginal patients seen in office practice over a 20-week period. Symptoms of emotional distress related to anxiety were rated at base-line, one week, two weeks and monthly thereafter. Relief was obtained notably early in therapy. The clinical results demonstrated that Librium offers the coronary patient an antianxiety drug that, in the author's opinion, is both effective and safe. In general use, the most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated. (See summary of prescribing information.)

Librium (chlordiazepoxide HCl) is used concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, diuretics and antihypertensive agents, whenever anxiety is clinically significant. The drug should be discontinued after anxiety has been reduced to appropriate levels.

The positive power of adjunctive Librium® (chlordiazepoxide HCl)

10-mg, 25-mg capsules up to 100 mg daily

for moderate to severe anxiety accompanying angina pectoris

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

*Levine, S.: "Angina Pectoris and Emotional Overlay," Scientific Exhibit presented at the Annual Meeting of the Maine Medical Association, Kennebunkport, Me., June 13-15, 1971.

A copy of the Levine study may be obtained from your Roche representative.

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Journal of The KENTUCKY *Medical Association*

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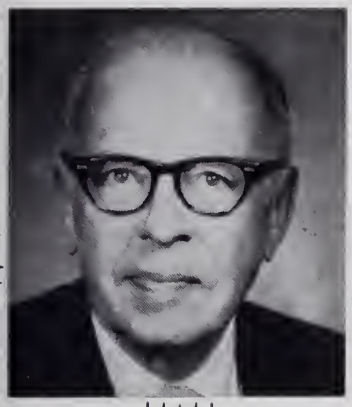
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MESSAGE FROM THE PRESIDENT

WHAT does the President of KMA remember as the year draws to a close? Mostly it seems to have been a year of public relations. Almost 20,000 miles have been covered for KMA, 6,000 by air and the rest by auto. The meetings of the adjacent state medical societies have been most interesting. Most of our neighbors are far behind us in peer review organization. I am more sure than ever that effective peer review will be a great help in preserving the private practice of medicine.

The January meeting on Health of the Americans in Lexington was an eye opener in the way American medicine was being criticized by propaganda. I did not have all the answers at the time, but when the facts were investigated it became evident to me that segments of both labor and management were simply using propaganda, simply a method of setting up a little empire of their own.

The district meetings have been fun, a chance to meet many doctors and their wives and to renew old acquaintances.

The Blue Shield meeting in Washington last fall was very informative and well worthwhile. We were addressed by many of the foremost political leaders in Washington, including Senator Kennedy. Everyone agreed that there is going to be a big push to change American medicine next spring. The trip to Washington in the spring to visit our Congressmen is well worthwhile if you are at all interested in medical practice. Everyone should plan to go next spring, not only for his own information, but to convince our own Congressmen that we are interested in what they are doing in Washington.

Work with the Committee on Legislative Activities was most profitable this year. William W. Hall, M.D., of Owensboro, Chairman for State Affairs, helped to formulate the final version of a generic drug bill with which we could live. Since we were told there would be such a bill whether we liked it or not, we like what we got better than what we would have had. A new Medical Licensure bill was passed and the Licensure Division moved to the recently completed addition of the KMA Office building the last of August.

The new addition to office space at KMA Headquarters has greatly improved working conditions for the very busy staff. Now that everyone has an office, working conditions are much more pleasant and efficient. Committees also have space to meet besides the Board Room. There are about 350 doctors on 38 committees, Board of Trustees, Judicial Council, plus the Foundation and its committees.

This past year saw the formation of the Foundation for Medical Care. Peer Review was placed under the Foundation. The next two years should show considerable growth in the activities of the Foundation.

Recently, David Hull, M.D., initiated a meeting between the Trustees of KMA and Blue Shield. This should become an annual meeting and include the county officers to develop a clear understanding by the doctors of Kentucky of their relationship to Blue Shield. In this issue of *The Journal* there is reproduced most of the talk given by Mr. Avil McKinney. There will be much less misinformation about Blue Shield if you will read this.

It has been fun and I hope, productive. Changes are being made, let us help make the changes for the better.

John S Harter

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 47-year-old divorced, gravida 12, para 10, had an EDC of 8-25-69. Past pregnancies were uncomplicated. She was seen initially for this pregnancy on 2-10-69. Hemoglobin was 10.6 gm%, hematocrit 64.-5%, Rh positive, weight 130 lb, blood pressure 120/80. When she was seen on 2-22-69, her blood pressure was 160/100; she was given Hydropres 50 mg daily, blood pressure remained normal until 6-6-69. A fasting blood sugar was obtained 5-28-69 and reported to be 175 mg%. She was given Orinase 0.5 gm daily.

Patient's visits:

Date - 1969	Weight	B.P.	Urine
2-10	130	120/80	Neg.
2-22	129	160/100	Neg.
3-17	132	140/80	Neg.
3-31	133	140/80	4+ sugar
5-5	137	140/80	1+ sugar
5-28	137	120/80	1+ sugar
6-6	139	160/90	1+ sugar

The patient was admitted to the hospital in active labor at 3 a.m., 8-4-69 having contractions every 10-12 minutes. Temperature was 99, pulse 84, blood pressure 136/88 and FHT 144, the membranes had ruptured and the amniotic fluid was green. She received 75 mg Demerol, 50 mg Vistaril, and 1/150 gr Scopalamine IM at 10 a.m. Vaginal examination at noon revealed the cervix with a thick anterior lip, the presenting part was high. However, she delivered spontaneously, with nitrous oxide, oxygen plus penthrane anesthesia, a 10 lb 7 oz stillborn male at 2:37 p.m. The amniotic fluid was described as very purulent with a foul odor.

At 3:10 p.m. the nurses noted her hands were very cold and moist, her blood pressure was 90/50, the pulse 140 and irregular. She appeared shocky at 3:30 p.m. (approximately one hour post partum), pulse 120-130, blood pressure 170/130. Her physician was notified; he examined the patient at 5:30 p.m. and placed her in an oxygen tent. She was digitalized with Cedilanid-D. Her pulse was 120 per minute, with respirations 36 per minute. The lungs were filled with moist rales. It was felt she had an acute pulmonary embolus, producing congestive heart failure and pulmonary edema. A stat blood sugar was ordered and 1000 cc Ringer's Lactate started IV. She was digitalized and a urinary catheter inserted. Morphine 1/6 gr plus atropine 1/300 gr stat. Aminophyllin 3 3/4 gr IV. She showed no improvement. Blood pressure was 130/90, pulse irregular. Blood sugar was reported 154 mg%. At 11:15 p.m. her color was poor with shallow respiration. She began having convulsive movements, and expired at 12:05 a.m., 8-5-69.

The cause of death was listed as acute pulmonary embolism with congestive heart failure and pulmonary edema. There was no autopsy.

Comment

The Committee classified this as a direct obstetric death with preventable factors on the part of the physician and the patient. It was noted that she was seen on 6-6-69, but then not seen again until she was in labor in August of 1969. The Committee considered this was probably negligence on the part of the patient, therefore a preventable patient factor.

As regarding the physician, the death is certainly not clearly discernable from the evidence given in the report. The possibility of a ruptured uterus with an exsanguinating hemorrhage is always possible in a situation of a Grand multipara, such as she was. This case again empasizes two factors, that without an autopsy the direct cause of maternal death cannot be established, and secondly that proper family planning would not allow this 47-year-old woman to achieve a gravidity of 12.

PUBLIC HEALTH PAGE

Kentucky's New Controlled Substances Law†

WILLIAM P. MCELWAIN, M.D., M.P.H.

Commissioner of Health
Commonwealth of Kentucky

ON July 1, 1972, the Kentucky Controlled Substance Act of 1972 became effective. This law replaces KRS 217 and KRS 218. Thus the entry of the new law, KRS 218A.

The introduction of KRS 218A now brings the Commonwealth of Kentucky closely parallel to the Federal Comprehensive Drug Abuse Prevention and Control Act of 1970.

There are, of course, some differences between the Federal and the State Acts. Some of these differences are listed below:

1. It is a violation of the Kentucky law to sample any controlled substances.

2. There is no provision in the Kentucky Act for the emergency prescription for Schedule II drugs.

3. All barbiturates are classified in Schedule III of the State Act whereas the Federal Act has them in Schedules III and IV. (The reason for this difference is for the benefit of laboratories; a barbiturate can be detected easily but to differentiate a long-acting from a short-acting barbiturate is much more costly and time consuming).

Narcotics are no longer in Class A and Class B. Narcotics along with dangerous drugs are now classified into Schedules I through V. Schedule I drugs are those drugs which: (1) have high potential for abuse; and (2) have no accepted medical use in treatment in the United States or lack accepted safety for use in treatment under medical supervision[1].

Some examples of Schedule I drugs include heroin, lysergic acid diethylamide (LSD) and hashish.

Substances are placed in Schedule II if: (a) the substance has high potential for abuse; (b) the substance has currently accepted medical use in treatment in the U.S., or currently accepted medical use with severe restriction; and (c) the abuse of the substance may lead to severe psychic or physical dependence[2].

Some examples of Schedule II drugs include the old Class A narcotics (Percodan*, Codeine*, Demerol* and Morphine*) plus amphetamines (Benzedrine* and Dexedrine*) and methamphetamine (Desoxyn*, Desbutal* and Obedrine L.A.*).

Also, included in Schedule II is Phenmerazine and its salts: (Preludin*) and Methylphenidate (Ritalin*).

Please, remember that a written prescription is necessary to obtain any Schedule II drug. They **may not** be prescribed by telephone by the physician. No prescription for Schedule II drug may be refilled.

Substances are placed in Schedule III if:

1. The substance has a potential for abuse less than the substances listed in Schedules I and II;

2. The substance has currently accepted medical use in treatment in the U.S.; and

3. Abuse of the substance may lead to moderate or low physical dependence or high psychological dependence.

A few examples are the old Class B narcotics: Glulethmide (Doriden*), Phencyclidine (Nalorphine*), Pentazocine (Talwin*) — (Parenteral or injectable form only) barbitu-

†*This article was prepared by: N. Earl Becknell, R.Ph., Director, Narcotic and Drug Control Program, Kentucky State Health Department, 275 East Main Street, Frankfort, Kentucky 40601*

1 *KRS 218A:040*
2 *KRS 218A:060*
* *Refers to Reg. Trade Marks in all incidences*

rates and Paregoric. Schedule III drugs may be ordered by the physician by phone.

Substances placed in Schedule IV are as follows: any material, compound, mixture, or preparation which contains any quantity of the following substance having a potential for abuse associated with a depressant effect on the central nervous system; (a) Chloral betaine; (b) Chloral hydrate; (c) Ethchlorvyrol; (d) Ethinamate; (e) Meprobamate; (f) Paraldehyde; and (g) Petrichloral.

Substances otherwise rescheduled by regulation of the State Board of Health of the controlled substances listed in this section are included in Schedule V as follows: any compound, mixture or preparation containing limited quantities of any of the following narcotic drugs, which also contains one or more nonnarcotic active medicinal ingredients in sufficient proportion to confer upon the compound, mixture or preparation, valuable medicinal qualities other than those possessed by the narcotic drug along with the exception of codeine. No more than 200 mg of codeine or any of its salts per 100 ml or per 100 gm are exempted.

All written prescriptions for controlled substances shall be dated as of and signed by the practitioner on the date when issued and shall bear the full name and address of the patient and the name, address and registration number of the practitioner. Records pertaining to controlled substances shall be retained for a period of two years. Controlled substances prescriptions other than Schedule II may be refilled five (5) times within six months if so indicated by the practitioner.

Every practitioner who is authorized to administer or professionally use controlled substances shall keep a record of such substances received (by him), and a record of all such substances administered, dispensed or professionally used (by him) otherwise than by prescription.

All practitioners dispensing exempt codeine preparations shall keep a separate registry showing the following: (a) date; (b) name of recipient; (c) address of recipient; (d) name or preparation; (e) quantity; and (f) practitioner's name.

A person to whom or for whose use any controlled substance has been prescribed, sold or dispensed by a practitioner or other person authorized under this Act, may lawfully possess it only in the container in which it was delivered to him by the person selling or dispensing it. To be considered properly labeled, the container of any said controlled substances, when dispensed to the ultimate consumer, must contain the name and address of the dispenser, the patient's name, date, directions for use and cautionary statements if needed.

No practitioner, pharmacist, manufacturer or wholesaler or other custodian of records, prescriptions or orders required by this Act shall refuse to permit the inspection thereof by any Federal, state, county or municipal officer whose duty it is to enforce the laws of Kentucky or of the U.S. relating to controlled substances.

For the purpose of enforcing the provisions of the Act, the designated agents of the State Department of Health have full power and authority of peace officers within Kentucky boundaries, including the power of arrest, the authority to bear arms, the power and authority to administer oaths, to enter premises at all times to make inspections, to seize evidence, to interrogate all persons, to require the production of prescriptions, books, papers, documents or other evidence, to employ special investigators and to expend funds for the purpose of obtaining evidence.

Information communicated to a practitioner in an effort unlawfully to procure a controlled substance, or unlawfully to procure the administration of any controlled substance, shall not be deemed a privileged communication.

All sales and distributions shall be in accordance with the Federal Controlled Substances Laws, including the requirements governing the use of order forms and where there is conflict between Federal and State Laws (i.e. all barbiturates under State Law in Schedule III) the more stringent law shall prevail.

Continuing Educational Opportunities

From The

KMA Postgraduate Medical Education Office

IN KENTUCKY

SEPTEMBER

19-21 KMA ANNUAL MEETING, Convention Center and Stouffer's Louisville Inn

OCTOBER

2-28 Coronary Care Nurses Training Program, King's Daughters Hospital, Ashland

6-7 Conference on the Handicapped Child, "The Handicapped Child — Status 1972," Health Sciences Center, Auditorium, University of Louisville School of Medicine. Contact: Margaret A. Limper, M.D., Commission for Handicapped Children, 1-(502)-635-5291.

21-22 Scientific Seminar, Kentucky Academy of Family Physicians, Park Mammoth Resort, Park City

NOVEMBER

2-3 Sixth Annual Newborn Symposium, "Infections in the Newborn," Department of Pediatrics, University of Louisville, Health Sciences Center Auditorium, Louisville

IN SURROUNDING STATES

OCTOBER

2-6 Annual clinical congress, American College of Surgeons, Fairmont Hotel, San Francisco

14-19 Annual meeting, American Academy of Pediatrics, Hilton Hotel, New York City

16-17 Tennessee Valley Medical Assembly, Read House, Chattanooga. Contact: Guy M. Francis, M.D., Chairman, 960 East Third Street, Chattanooga, Tennessee 37403.

23-26 Annual meeting, American College of Chest Physicians, Denver Convention Center, Denver

24-26 National Conference of State Medical Association Representatives on Continuing Medical Education, Ambassador Hotel, Chicago

27-28 Tennessee-Kentucky Regional Meeting, American College of Physicians, Sheraton Motor Inn, Memphis

NOVEMBER

13-16 Annual meeting, Southern Medical Association, New Orleans

13-16 Scientific Assembly, Interstate Postgraduate Medical Association, Washington-Hilton Hotel, Washington, D.C.

26-29 Clinical Convention, American Medical Association, Cincinnati

SEND IN MEETING INFORMATION

Many medical organizations are setting dates for their fall and winter meetings. At the same time they are choosing the topics to be discussed, arranging for speakers and planning programs.

The Continuing Medical Education office of the Kentucky Medical Association would like to urge these societies and organizations to notify this office of these dates and topics so they can be added to the "Continuing Education Opportunities" calendar in *The Journal*. In this way conflicts in dates can be avoided and a wider audience can be informed of these upcoming meetings.

Please send such information, when available, to the KMA Continuing Medical Education Office, 3532 Ephraim McDowell Drive, Louisville, Ky. 40205.

Pinworm therapy is often a family affair





Contraindications: History of hypersensitivity to thiabendazole.
Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.
Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction, patients should be carefully monitored.
Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia malodor of the urine, crystalluria, hematuria; appearance of liv Ascaris in the mouth and nose. Hypersensitivity reactions

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For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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addendum

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INDICATIONS	DOSAGE (1st Day)	ADDITIONAL REGIMEN	COMMENTS
Pinworm disease	Two doses of 1 tablet/50 lb	Repeat 7 days later	This regimen is designed to reduce the risk of reinfection. However, if not practical, repeat the regimen the next day.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses of 1 tablet/50 lb	Repeat the next day	Alternatively, a single dose of 2 tablets/50 lb may be given. However, a higher incidence of side effects should be expected.
Creeping eruption	Two doses of 1 tablet/50 lb	Repeat the next day	If active lesions are still present 2 days after completing this regimen, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses of 1 tablet/50 lb	Repeat for 2 to 4 successive days	The optimal dosage for the treatment of trichinosis has not been established.

The recommended maximal daily dosage is 3 g (6 tablets).

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

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Before prescribing, please consult complete product in mation, a summary of which follows:

Indications: Acute, recurrent or chronic urinary tract fections (primarily cystitis, pyelitis, pyelonephritis) to susceptible organisms (usually *E. coli, Klebsi Aerobacter, Staphylococcus aureus, Proteus mirab* and less frequently, *Proteus vulgaris*) in the absenc obstructive uropathy or foreign bodies.

IMPORTANT NOTE: *In vitro* sulfonamide sensitivity t are not always reliable. The test must be carefully coo nated with bacteriologic and clinical response. When patient is already taking sulfonamides, follow-up cultu should have aminobenzoic acid added to the culture me Currently, the increasing frequency of resistant organi is a limitation of the usefulness of antibacterial agents cluding the sulfonamides, especially in the treatmen chronic and recurrent urinary tract infections.

Free sulfonamide blood levels should be measured in tients receiving sulfonamides for serious infections si there may be wide variations with identical doses; 20 100 ml should be maximum total sulfonamide level, adverse reactions occur more frequently above this l

Contraindications: Hypersensitivity to sulfonamides, fants less than 2 months of age (except adjunctively pyrimethamine in congenital toxoplasmosis), pregna at term, and during the nursing period.

Warnings: Safety of sulfonamides in *pregnancy* has been established. Sulfonamides will not eradicate gr A streptococci. Deaths associated with sulfonamide ministration have been reported from hypersensiti reactions, agranulocytosis, aplastic anemia and o blood dyscrasias. Clinical signs such as sore throat, fe pallor, purpura or jaundice may be early indication serious blood disorders. Complete blood counts urinalyses with careful microscopic examination sho be performed frequently during sulfonamide therapy

Precautions: Use with caution when impaired rena hepatic function, severe allergy or bronchial asthm present. In glucose-6-phosphate dehydrogenase-defic individuals, hemolysis (frequently a dose-related r tion) may occur. Maintain adequate fluid intake to vent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocyto aplastic anemia, thrombocytopenia, leukopenia, he lytic anemia, purpura, hypoprothrombinemia, methe globinemia. *Allergic reactions:* Erythema multiforme (vens-Johnson syndrome), generalized skin erupti epidermal necrolysis, urticaria, serum sickness, pruri exfoliative dermatitis, anaphylactoid reactions, perio tal edema, conjunctival and scleral injection, photose tization, arthralgia, allergic myocarditis. *Gastrointest reactions:* Nausea, emesis, abdominal pains, hepat diarrhea, anorexia, pancreatitis, stomatitis. *C.N.S. r tions:* Headache, peripheral neuritis, mental depress convulsions, ataxia, hallucinations, tinnitus, vertigo, somnia. *Miscellaneous reactions:* Drug fever, chills, t nephrosis with oliguria and anuria. Periarteritis noc and L.E. phenomenon have occurred with sulfonam therapy. Sulfonamides bear certain chemical similari to some goitrogens, diuretics and oral hypoglyce agents. Goiter production, diuresis and hypoglyce have occurred rarely in patients receiving sulfonami Cross-sensitivity may exist with these agents.

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a partnership for life



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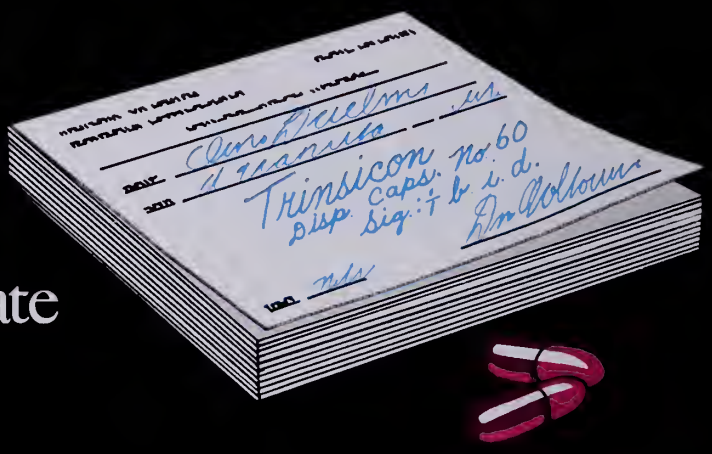
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(See reverse side for prescribing information)

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Special Liver-Stomach Concentrate, Lilly (containing Intrinsic Factor)	240 mg.
Cobalamin Concentrate, N.F., equivalent to Cobalamin	7.5 mcg.
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Iron, Elemental (as Ferrous Fumarate)	110 mg.
Ascorbic Acid (Vitamin C)	75 mg.
Folic Acid	0.5 mg.

Indications: Trinsicon is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia. Therapeutic quantities of hematopoietic factors that are known to be important are present in the recommended daily dose.

Vitamin B_{12} with Intrinsic Factor—When secretion of intrinsic factor in gastric juice is inadequate or absent (e.g., in Addisonian pernicious anemia or after gastrectomy), vitamin B_{12} in physiological doses is absorbed poorly, if at all. The resulting deficiency of vitamin B_{12} leads to the clinical manifestations of pernicious anemia. Similar megaloblastic anemias may develop in fish tapeworm (*Diphyllobothrium latum*) infection or after a surgically created small-bowel blind loop; in these situations, treatment requires freeing the host of the parasites or bacteria which appear to compete for the available vitamin B_{12}. Strict vegetarianism and malabsorption syndromes may also lead to vitamin B_{12} deficiency. In the latter case, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary for adequate treatment of the patient.

Potency of intrinsic factor concentrates is determined physiologically, i.e., by their use in patients with pernicious anemia. The liver-stomach concentrate with intrinsic factor and the vitamin B_{12} contained in two Pulvules Trinsicon provide 1½ times the minimum amount of therapeutic agent which, when given daily in an uncomplicated case of pernicious anemia, will produce a satisfactory reticulocyte response and relief of anemia and symptoms.

Concentrates of intrinsic factor derived from hog gastric, pyloric, and duodenal mucosa have been used successfully in patients who lack intrinsic factor. For example, Fouts *et al.* maintained patients with pernicious anemia in clinical remission with oral therapy (liver extracts or intrinsic factor concentrate with vitamin B_{12}) for as long as twenty-nine years.

After total gastrectomy, Ficarra found multifactor preparations taken orally to be "just as effective in maintaining blood levels as any medication that has to be administered parenterally." His study was based on twenty-four patients who had survived for five years after total gastrectomy for cancer and who had been taking two Pulvules Trinsicon daily.

Folic Acid—Folic acid deficiency is the immediate cause of most, if not all, cases of nutritional megaloblastic anemia and of the megaloblastic anemias of pregnancy and infancy; usually, it is also at least partially responsible for the megaloblastic anemias of malabsorption syndromes, e.g., tropical and nontropical sprue.

It is apparent that in vitamin B_{12} deficiency (e.g., pernicious anemia), lack of this vitamin results in impaired utilization of folic acid. There are other evidences of the close folic acid-vitamin B_{12} interrelationship: (1) B_{12} influences the storage, absorption, and utilization of folic acid, and (2), as a deficiency of B_{12} progresses, the requirement for folic acid increases. However, folic acid does not change the requirement for vitamin B_{12}.

Iron—A very common anemia is that due to iron deficiency. In most cases, the response to iron salts is prompt, safe, and predictable. Within limits, the response is quicker and more certain to large doses of iron than to small doses.

Each Pulvule Trinsicon furnishes 110 mg. of elemental iron (as ferrous fumarate) to provide a maximum response.

Ascorbic Acid—Vitamin C plays a role in anemia therapy. It augments the conversion of folic acid to its active form, folinic acid. In addition, ascorbic acid promotes the reduction of ferric iron in food to the more readily absorbed ferrous form. Severe and prolonged vitamin C deficiency is associated with an anemia which is usually hypochromic but occasionally megaloblastic in type.

Contraindications and Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

Folic acid *alone* is unwarranted in the treatment of pure vitamin-B_{12}-deficiency states, such as pernicious anemia. Indeed, the use of folic acid in large doses in pernicious anemia without adequate vitamin B_{12} may result in hematologic remission but neurological progression.

As with all preparations containing intrinsic factor, resistance may develop in some cases of pernicious anemia to the potentiation of absorption of physiological doses of vitamin B_{12}. If resistance occurs, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary for adequate treatment of the patient. No single regimen fits all cases, and the status of the patient observed in follow-up is the final criterion for adequacy of therapy. Periodic clinical and laboratory studies are considered essential and are recommended.

In extremely rare instances, skin rash suggesting allergy has been noted following the oral administration of liver-stomach material. Allergic sensitization has been reported following both oral and parenteral administration of folic acid.

Hemochromatosis and hemosiderosis are contraindications to iron therapy.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastrointestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects in the iron-sensitive patient.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

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—George Sarton, from "The History of Medicine Versus the History of Art"

Would it be useful in clinical practice to have government predetermine drugs of choice?

Opinion

Results of a survey of physicians:

13.3%
Yes, it would be useful.

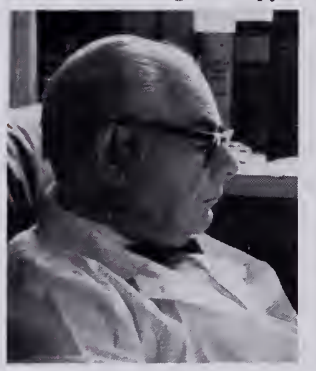
86.7%
No, it would not be useful.

Dialogue

Would it be useful in clinical practic to have government predetermine drugs of choice?

Doctor of Medicine

Walter Modell, M.D.,
Professor of Pharmacology,
Cornell University
Medical College,
Editor,
Clinical Pharmacology
& Therapeutics,
Drugs of Choice,
Rational Drug Therapy



The proposition that government should determine one or two "drugs of choice" within a given therapeutic class reflects the belief that a similarity in molecular structure insures a close similarity in pharmacologic effect. But this is by no means the rule. An obvious example would be in the field of diuretics, where a small change in chemical structure accounts for substantial differences in concomitant effects such as potassium excretion.

Any attempt to dictate the "drug of choice" would be complicated by the fact that some populations demonstrate a bimodal distribution in their reaction to drugs. If the data on drug response are mixed for the total population, one drug will appear to be as useful as the other. But if drug response is reported separately for different segments of the population, drug A will be found to be better for one group and drug B for the other.

It may, of course, be possible to determine drugs of choice in particular categories on a broad statistical basis. But there are always certain patients in whom a drug produces odd, unpredictable or idiosyncratic reactions. So, though a drug might statistically be the most useful one in a given situation, individual variations in response might make it the *incorrect* one.

The point I wish to make is that if two, three, four or more drugs in one class are of approximately equal merit, that in itself is justification for their availability. Exceptional cases do arise in which one drug would be useful to a certain segment of the population and another drug would be of no use at all. In the practice of medicine, the physician must be prepared to treat the routine as well as the unusual case.

Another objection to the determination of a drug of choice is that precise statements of *relative* efficacy are very difficult to make—much more difficult than statements of efficacy. For example, in testing drug efficacy, it is easy to determine the difference between a drug that is effective in treating a condition and one that is not at all effective. Thus, it is fairly easy to determine whether a drug is more effective than a placebo. But if you compare one drug that is effective with another drug that is also effective, and the relative differences between them are very slight, statements of relative efficacy may be very difficult to make with assurance.

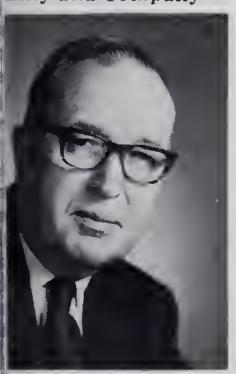
I do not mean to imply that relative efficacy statements are not useful or can never be made. With some groups of drugs (e.g., analgesics), extensive study and precise methodology have yielded useful information on relative efficacy. But in most situations, such information can be acquired only through studies encompassing three to five years of use in many more patients than are used to compare drugs with a placebo for the introduction of a drug into commerce. It is really only after practitioners use a drug extensively that relative safety and efficacy in practice can real determined.

The Bureau of Dru suggested the packa sert as a possible mea communicating inform on relative efficacy of to the physician. I fin objectionable, since not believe the phy should have to rely o source for final scie truth. There is also a tical objection: Sinc physicians actuall pense drugs, they s see the package inse any event, I would tain that the phys should know what dr wants and why witho pending on the goverr or the manufacturer him.

Undoubtedly, phys are swamped by exc numbers of drugs in therapeutic categorie I am well aware that drugs within such gories could be elimi without any loss, or haps even some pro the practice of med But, in my opinion, n the FDA nor any single group has the e tise and the wisdom sary to determine th "drug of choice" i areas of medical prac

laker of Medicine

th G. Kohlstaedt, M.D.,
Vice President,
ledical Research,
Lilly and Company



ny opinion, it is not action of any governor private regulatory to designate a "drug ce." This determinaould be made by the ian after he has re- full information on operties of a drug, en it will be based on perience with this nd his knowledge of lividual patient who ing treatment.

n evaluation of com- e efficacy were to be particularly by gov- nt, at the time a new being approved for ing, it would be a disservice to medi- d thus to the patient onsumer. For exam- ien a new therapeu- nt is introduced, on is of limited knowl- may be considered more potent, more ive, or safer than cts already on the t. Conceivably, at me the new drug e labeled "the drug ice." But as addi- linical experience is ulated, new evidence ecome available. it may be apparent that the established products should not be so easily dismissed.

Variation in patient response to drugs constitutes one of the major obstacles to the determination of "drugs of choice." We are just beginning to open the door on pharmacogenetics, but it is evident that genetic differences cause wide variations in the way drugs are absorbed, metabolized, etc. This fact alone is sufficient to make unrealistic the idea that there is one drug in each class to be used for every human being.

The problem of determining relative drug efficacy is an extremely complicated one. Comparison with other drugs of the same class should not be a prerequisite for marketing a new substance. In some therapeutic areas, it may be difficult to make accurate comparisons. For example, in the treatment of infections it is not possible to conduct crossover studies. Recovery may be influenced by factors which cannot be controlled or measured, i.e., natural host resistance and virulence of infective agents. A drug's acceptability must often be judged on the basis of its own performance, and this may be limited to experience in a relatively small patient population. If the introduction of a new drug must await the adequate establishment of relative efficacy, the duration of clinical trial and extent of studies would be greatly prolonged, particularly for rare or unusual conditions. The availability of a new drug would be delayed. Many patients might suffer needlessly and lives might be lost.

Relative efficacy can best be established by experience in a general patient population through regular channels of clinical practice. The physician considers the patient as a whole, which means the patient often has multiple problems and drugs must be selected with this in mind. Hence, a "drug of choice" in an uncomplicated case may not be the best drug for a patient with associated problems. Publication of well-controlled studies in medical journals may provide comparative evidence; discussions at medical meetings, presentations at postgraduate courses, and the new audiovisual technology may bring evidence to physicians on comparative therapy. In a free medical marketplace, a drug that does not measure up will fall into disuse. For example, broad clinical experience has established vitamin B_{12} as the "drug of choice" for the treatment of primary pernicious anemia. No amount of advertising or promotional effort by the manufacturer could increase the use of liver extract for this anemia. However, a physician may wish to employ parenteral liver preparations for a special purpose.

In the field of surgery, peer review in the hospital has brought significant improvement in the use of new techniques and procedures. Something of this nature would be useful in the area of drug therapy. However, it should be developed by the medical profession itself and would necessitate, for its proper function, an improvement in the dissemination of reliable data on clinical pharmacology of drugs under consideration.

Ideally, information on the relative efficacy of drugs should be gathered and assessed by the physicians who actually administer the specific agents to a specific patient population. To do this, they will need even more information on the drugs they use – information that the pharmaceutical manufacturers must begin to provide if government regulation of *"drugs of choice"* is to be avoided.

Opinion & Dialogue

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VOLUME 70 SEPTEMBER 1972 No. 9

Health Care for An Urban Population: The Emergency Sector†

E. TRUMAN MAYS, M.D., DONALD H. MOSLEY, M.D., WILLIAM T. RUMAGE, JR., M.D. AND CHARLES SETLIFFE

Louisville, Kentucky

A basic shift in patterns of health care for urban populations is demonstrated by a survey of hospital emergency facilities. The increased use of emergency facilities for non-emergent health problems can only result in decreased efficiency in the care of actual emergencies.

THE delivery of improved health care is a current concern of various sectors of public and private life. One particular aspect of overall health care is that commonly referred to as "emergency medicine." The criteria as to what truly constitutes an emergency is vague and elusive in many situations, but extremely clear in others. From a practical standpoint it must be recognized that if the patient considers his particular problem an emergency, it is just that (at least to the patient or family involved). The medical profession is forced to accept the public's definition of the emergency department—**a place to get medical aid in a hurry.**

The enormity of the problem is best reflected by the volume of patients requiring this particular kind of health care. The number of emergency department visits throughout the nation increased by 300-400% over a 15-year period. Overall the annual utilization rate increased from 58 visits per 1,000 population in 1954, to 192 in 1969[1,2]. The single most important factor associated with this increase is the growing number of patients treated for non-emergent medical conditions.

This increased utilization of emergency facilities by the general public attests the basic shift in patterns of medical care in urban populations. This changing pattern in health care will require hospitals and physicians to enlarge and upgrade emergency facilities to meet these rising demands.

It is our thesis that modification and improvement in emergency medical services must grow out of orderly accumulation of data and its careful analysis. Acknowledging the need and right of the public to emergency health care and recognizing that both private and governmental agencies are responsible for serving these needs in a cooperative effort, the Emergency Care and Disaster Committee of the Jefferson County Medical Society surveyed emergency facilities. The modus operandi consisted of: 1) questionnaires completed by the emergency room head nurse, 2) questionnaires completed by the hospital administrator, 3) a survey team (administrator, registered nurse and medical doctor) from a nearby hospital visited the assigned emergency department, discussed the above questionnaires and completed their own survey form. In this manner, data

†*From the Emergency Care and Disaster Committee, Jefferson County Medical Society, Louisville. Mr. Setliffe is with the Hospital Council Metropolitan Louisville.*

was collected from more than one source both internal and external.

Results

In April, 1971, 10 major hospitals and a Neighborhood Health Center in the Louisville-Jefferson County area were studied by the above methods. Each hospital was assigned a code name. Only members of the Committee were cognizant of the code. The 10 hospitals surveyed and their bed capacities are listed in Table I.

Table I

SURVEYED HOSPITALS	BED CAPACITY
St. Joseph Infirmary	500
Kentucky Baptist Hospital	415
Louisville General Hospital	385
St. Anthony Hospital	324
Norton Memorial Infirmary	307
Methodist Evangelical Hospital	300
Jewish Hospital	279
Ss. Mary & Elizabeth Hospital	224
Louisville Memorial Hospital	165
Children's Hospital	139
Neighborhood Health Center	

During 1970, 237,760 patients received health care on an emergency basis in the 10 hospitals surveyed. The population of the area surveyed is 695,055. This means that 34% of this urban population required emergency services during the year. A small percentage of these individuals were not residents of the area, but this small number would not significantly affect the study. After initial resuscitative care, 2,477 patients required transfer to another facility for further medical care.

The emergency departments surveyed have an average of four patient rooms with a range from four to ten rooms. The equipment and facilities available are shown in Table II.

In 10 hospitals at least one physician, nurse, inhalation therapist and anesthesiologist always respond to a cardiac arrest. In seven hospitals the nurse actually went through the use of the defibrillator with the survey team and in four, a registered nurse defibrillates a patient if a medical doctor is not available.

Three hospitals without 24-hour x-ray facilities have coverage for 17 hours in one and eight hours in two. A radiologist is available if needed after regular hours in eight hospitals.

Eight emergency departments see patients under two years of age, and six admit patients under two years of age to their institution.

Table II

Equipment Present in E.R.	No. Hospitals
Defibrillator	10
Monitorscope	7
Laryngoscope	10
Endotracheal tubes	10
Ambu bags	10
Suction	10
Oxygen	10
Mechanical ventilators	6
Facilities Available on 24-Hour Basis	
Standard lab procedures	10
Blood gases	10
Electrolytes	10
Blood Bank	9
X-ray	8
Special cardiac room	9
Special pediatric room	3
Cardiac resuscitation procedure	9

A one week survey shows the different kinds of patients encountered (Table III).

Personnel

There is physician coverage of the emergency room on a 24-hour basis in six hospitals. In three hospitals a physician covers both house and emergency room on a 24-hour basis and in one a physician is available for house and emergency room coverage on a 16-hour basis. One hospital lacks physician coverage of the emergency room or the house. In seven instances physician coverage is on a limited licensure basis. In nine hospitals the physician call list was judged to be current and the list covered all the usual specialties.

Non-physician personnel attending these emergency departments are described in Table IV. Seven hospitals have registered nurse coverage on a 24-hour basis. The non-physician personnel are assigned to the emergency room on a permanent basis in six hospitals.

Table III

	No. Pts.
Acute Trauma	1,441
Surgical Illness	403
Medical Illness	1,804
Elective Surgery	138
Special Examinations	72
Clinic Visit	306
Total Patient Visits	4,164
Total Non-Emergent Visits	2,264
Percent Non-Emergent	54%

Kinds of health problems requiring emergency services in ten hospitals, for a one week period of time.

Operating room facilities and anesthesia are available in the hospital 24-hours a day in six hospitals. In the four hospitals without 24-hour operating rooms there is 16-hour availability in three, and eight-hour availability in one, and the time required to come in and set up the O.R. is 15, 20, and 30 minutes. Anesthesia requires 15-30 minutes to come into the hospital in those without 24-hour coverage.

Table IV

	7 a.m. - 3 p.m.	3 p.m. - 7 p.m.	11 p.m. - 7 a.m.
R.N.	22	14	11
L.P.N.	3	9	6
Aide	12	7	7
Orderly	2	3	2
Clerk	8	9	2
Total	47	42	28

Staffing pattern (non-physician) by eight hour shifts.

Disaster Potential

All 11 institutions surveyed have a current disaster plan, and in 10 a disaster plan was shown to the surveyors. The physician disaster team call list is not current in three hospitals, but the hospital personnel disaster call list was judged current in all but one hospital.

A special phone for disaster operations is present in nine hospitals. In four the phone is located in the emergency department. In eight hospitals the personnel were aware of this phone and know what to do if it rings. In seven hospitals the operator answers the disaster phone and in four the nurse answers it. In eight hospitals the individual answering the disaster phone immediately notifies the administrator of the hospital, and in one each the nursing supervisor, the Centrex Communication Center and the in-hospital house staff are notified. However, in all 11 institutions it is only the administrator who can initiate the disaster plan. Each hospital cooperates with the Civil Defense in two mock disasters each year.

Fee for Service

The charges to patients for common emergency care are shown in Table V. Three hospitals had no charge for an emergency room visit in which the patient was examined by his or her private physician. The collection rate for charges made for emergency department services ranged from 33% to 75% as compared to overall hospital collection rates ranging from 54% to 98%.

Problems

The major problem encountered in providing emergency care to this urban population is the number of non-emergencies these facilities are called upon to manage. Four hospitals listed this as the most critical obstacle toward maintaining and upgrading emergency services in their hospital. The 54% non-emergencies (Table III) is slightly higher than the overall national rate of 42%[4]. In the busiest emergency department 62% of the patients seen are not true emergencies.

The second major problem is lack of staff and space. At least two emergency departments were judged completely inadequate regarding floor space and room in the emergency area of the hospital. The third problem is lack of two-way communication with the emergency transportation vehicles.

In response to the question would you favor and use a standard emergency room form if developed by the Jefferson County Medical Society and the Hospital Council Metropolitan Louisville, six answered YES and two answered NO.

Categorization

The 11 institutions surveyed were classified according to the plan suggested by the National Academy of Sciences[3]:

TYPE I: FIRST AID FACILITY: does not have a physician present at all times.

Table V

Service	Average Fee	Range
E. R. visit and contact with personal M.D.	$10.00	$7.00-$15.00
E. R. visit with house physician	$12.00	$5.00-$15.00
Repair laceration: (per stitch)	$ 1.16	$0.50-$ 2.00
(per suture tray)	$ 7.50	$5.00-$10.00

Charges for common emergency visits.

TYPE II: EMERGENCY HOSPITAL: a physician is present in the emergency area at all times.

TYPE III: MAJOR EMERGENCY HOSPITAL: staffed 24 hours around the clock by a team of specialists available within minutes; blood banks, x-ray facilities (including angiography capability on 24-hour basis), complete resuscitative equipment, well developed clinical laboratory services and ready accessibility to operating rooms (24 hours); specialized consultants available at all times.

TYPE IV: THE EMERGENCY FACILITY COMBINED WITH A TRAUMA RESEARCH UNIT

It is obvious that the facilities of the entire hospital are actually being classified and not just the emergency room. One hospital surveyed in the Louisville-Jefferson County area meets the requirements of the Major Emergency Facility (Type III). Five are rated Emergency Hospitals (Type II) and five First Aid Facilities (Type I). None are classified Type IV.

Discussion

The increased use of emergency facilities by the general public in an urban community indicates an important shift in patterns of medical care. In a nationwide survey, 42% of patients registered in emergency rooms were considered to have non-emergency problems[4]. There is a national trend among "core city" populations to use the emergency department as the sole source of general medical care. This trend insures decreased efficiency in the care of actual emergencies. The concentration of skilled personnel and complex diagnostic and therapeutic equipment within hospitals thrust them into the position of being essential community resources for patients with non-emergent as well as emergent problems. This trend is undoubtedly encouraged by physicians who refer patients to the hospital emergency department for care, and physicians who use the emergency department instead of their office.

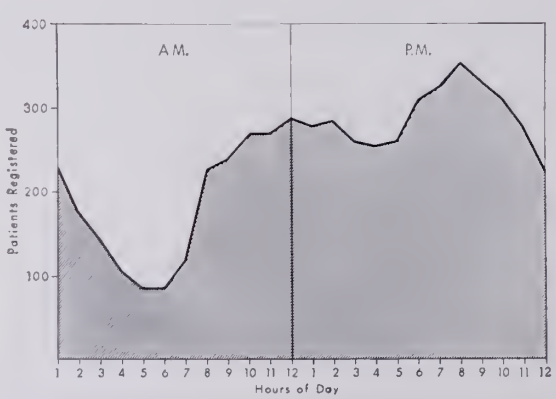


FIG. 1 Pattern of utilization by hour of day of emergency facilities of the Louisville General Hospital. Each hour represents average number of patients registered.

Many have stressed educating the public as to what constitutes an emergency and when they should and should not utilize the emergency services of hospitals. With the utilization of emergency services increasing at an annual rate of 15%[2] it is unlikely that this goal can be accomplished.

Because the spectra of human experience and reaction to health problems are so varied we doubt the value of educating patients regarding the urgency of their need of emergency facilities. It is more realistic to spend our time designing and providing facilities to meet the health needs of individuals as they feel awareness for them.

If we acknowledge the present trends of urban populations seeking emergency services and anticipate the number requiring such services in the next decade, physicians and hospitals must design systems to deliver this kind of service to a large portion of the population.

The increased utilization of emergency facilities by the public creates a real dilemma in staffing emergency departments. Analysis of patterns of patient utilization of emergency departments by hour of day and day of week as illustrated by Figures 1 and 2 is helpful in anticipating needs and planning for 24-hour coverage.

The perennial difficulty in 24-hour physician staffing of emergency departments has been made even more acute by the burgeoning growth in use of hospital emergency facilities for ambulatory non-emergent illnesses. Four basic patterns generally used in staffing hospital emergency rooms are:

1) Rotation of all or part of the attending staff
2) Interns and/or residents
3) Salaried physicians
4) Medical group or partnerships

Historically, hospitals solved their problem

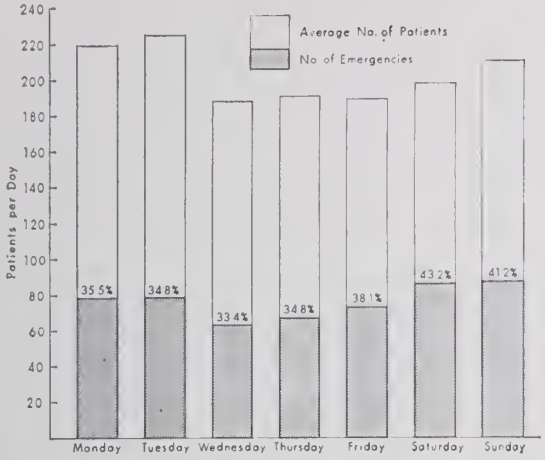


FIG. 2 Pattern of utilization of emergency facilities by day of week. (LGH)

in staffing the emergency room by rotating the duty among the medical staff either voluntarily or as a requirement for practicing in that particular hospital. The failure of this voluntary or compulsory system is related to several factors:

1) Physicians already feel overloaded with their patient and committee responsibilities on the medical staff.

2) Most physicians in this urban area have multiple staff appointments and responsibilities which hinder availability.

3) Physicians with multiple staff appointments have diminished allegiance to any one hospital.

4) Specialists resist supplying care in any field other than their specialty.

5) Physicians live and practice long distances from city hospitals and cannot respond to emergency calls within 15 or 20 minutes, especially in heavy traffic[5].

Limitations are increasingly restrictive regarding the use of interns in emergency rooms. Medical school deans are alert to the "use" of interns for coverage of emergency without proper supervision. Twenty percent of U.S. hospitals have internship and/or residency programs and report criticism for not properly supervising interns in the emergency rooms. With internships rapidly becoming extinct, it is unlikely that this method of staffing emergency rooms will any longer exist.

The reservoir of physicians interested in emergency medicine on a salaried basis has been generally limited to graduates of foreign medical schools. The quality of medical care given by this group is often under less scrutiny than other forms of hospital practice. Medical staffs have highly organized tissue, medical audit, medical record and utilization committees to assess the quality of care given to in-patients, but staff committees do not ordinarily monitor the quality of care given in the emergency department, nor does this area usually fall under Peer Review. Hence, we have a system that provides medical care to roughly a third of the population of Louisville and Jefferson County with little interest from any quarter in regard to quality. Does the medical profession plan to wait for federal or state insistence as we have done in the past before policing this area of our health care delivery system?

Hospitals also have a responsibility in this area. All deaths within 24 hours of admission via the emergency service should receive vigorous professional scrutiny. Hospitals relying on intern staffing without resident or other physician supervision must admit that the clinical supervision of the intern is insufficient in terms of medical education and of patient care. Hospitals using foreign trained residents or interns to staff their emergency service should be certain that the residents' practical use of English is sufficient to communicate with his patient[1].

The last method of physician staffing of emergency departments may be the answer to the dilemma. Such partnerships or associations seem to be working successfully[6, 7, 8]. The major problem is lack of physicians to enter this field. Physicians with particular interests and adequate preparation cannot just be legislated into existence by state or federal government. Increasing the enrollment of medical school classes will make a meager contribution to this desperate lack of physicians trained in the area of emergency medicine. The solution is stimulation of interest at an early stage of training in the challenge of emergency medicine as a career. The University of Louisville School of Medicine has recently established a two year residency in Emergency Medicine and approved quotas of six residents in each year.

The lack of a recognized board of certification will probably be only a transient deficiency. Another problem is lack of recognition of the emergency department. Many feel that the

establishment of medical school or hospital departmental status for the Emergency Department and authority to enlarge the teaching responsibility in emergency medicine is essential if interested physicians for emergency health care are trained and prepared for this neglected area. Physician staffing is expensive and hospitals must be willing to pay good salaries if they want good physicians and thus, good emergency services.

Although staffing at the physician level is the most critical problem, an increasing need for registered nurses is imminent because of the ever-increasing utilization of the emergency department by ambulatory non-emergent problems. The increasing number of truly critical and seriously ill patients requires that registered nurses maintain their expertise in resuscitation and management of emergency problems. Cardiac and intensive care unit nurses' training and education have become popular. The nurse in the emergency department has seemingly been overlooked regarding her need for continuing medical education.

Responsive to this deficit, our committee in association with the Kentucky Medical Association and the American College of Surgeons sponsored a one-day training course for emergency room nurses in the spring of 1971. Because of the overwhelming success of this first seminar, this course was enlarged and repeated May 11-12, 1972. Hospitals and county medical societies should urge their registered nurses to attend any future seminars. A large reservoir of highly skilled nurses must be established as the need for emergency medical services escalates.

A great deal of interest in categorization of emergency rooms has been expressed in recent months. Most concerned professional groups believe that categorization is appropriate, desirable and probably inevitable.

The University Association for Emergency Medical Services at their annual meeting in Ann Arbor, Michigan (May 14-15, 1971) identified both the advantages and disadvantages of categorizing emergency departments.

ADVANTAGES

1) Improve facilities in hospitals by serving as a uniform standard which hospital trustees and elected officials can understand

2) Aid rescue squads in the initial distribution of injured patients

3) Establish a basis for secondary transfer to higher category facility, once life-saving measures have been instituted

4) Improve emergency medical care by calling attention to the magnitude of the problem

DISADVANTAGES

1) Subject to financial and political abuse

2) Affects only a small minority of patients going to emergency rooms

3) Provides an excuse for some hospitals to refuse to offer their fair share of care, especially to indigent patients and may pose economic hardships in those hospitals responsible for indigent population.

4) Undue attention to categorization may detract from the overall needs of a community and regional planning

A multidisciplinary conference held February 27-28, 1971, under the auspices of the Commission on Emergency Medical Services of the AMA, established guidelines for categorization that may be used nationally (Table VI)[9].

Table VI

CATEGORY I

Comprehensive Emergency Service

Equipped, prepared and staffed to provide immediate and complete medical care for all emergencies, even complex and specialized services. Capacity to accommodate the direct and referred patient loads of the region served. Capable of providing consultative support to professional personnel of other hospitals in the same region.

CATEGORY II

Major Emergency Service

Equipped, prepared and staffed in all medical and surgical specialties to render resuscitation and life-support. Definitive care for all except occasional patient requiring care in very specialized units. Transfer may be necessary.

CATEGORY III

General Emergency Service

Most medical and surgical specialties to render resuscitative and life-support care of persons critically ill or injured. Additional services with non-staff specialists. Transfer may be necessary.

CATEGORY IV

Standard Emergency Service

Emergency resuscitative and life-support services pending transfer of critically ill or injured persons to other hospitals.

—Capable of adequate medical services for non-critical illnesses and injuries.

Suggested categories for classifying emergency rooms and hospital support systems. Condensed from Hendryson, I.E.[9].

Hospitals in this survey were categorized by less rigid criteria than that suggested by some groups. Such classification has little practical importance until national standards are agreed upon and then it will most likely have to be part of an overall plan for regional hospital medical and emergency services coordination. Unilateral attempts to improve the efficiency of emergency room operations without concomitant regional planning may of itself be self-defeating[10, 11].

Acknowledgement

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Joint Commission Sets Revised Standards—Holds TAP Institutes

The revised Standards of the Joint Commission on Accreditation of Hospitals mandate that hospital boards, administration and organized medical staffs implement programs to assure the quality and cost effectiveness of all care rendered for both in-patients and out-patients. The Joint Commission and its parent organizations—the American College of Physicians and of Surgeons, the AMA and the AHA—believe that the quality assurances demanded by the Standards will be effective in satisfying the demands of the consumer movement and its political supporters for public accountability. By reaffirming the ultimate responsibility of the hospital governing authority, the Standards present a system in which control of the quality remains professional, local and internal to the hospital, while still functioning in the context of public accountability.

The TAP (Trustees, Administrators, Physicians) Institutes sponsored by the Joint Commission, translate these quality requirements into practical, realistic hospital credentialling and medical audit systems. The Institutes will advise key medical staff, administrative and board personnel in how to conduct and document an internal quality assurance program that will, by conforming to the Standards, qualify a hospital to become or to remain accredited and at the same time satisfy the broad policy demands of the public.

The TAP Institutes schedule as of August 1, 1972 is:

Oct. 20-22	Biloxi, Miss.	April 14-16	Homestead, W. Va.
Nov. 4-5	Gatlinburg, Tenn.	May 4-6	Ocean City, Md.
Dec. 2-3	Watertown, Maine	May 11-13	Lake of the Ozarks, Mo.

Reye's Syndrome: Marked Fatty Metamorphosis of the Liver with Encephalopathy†

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Lexington, Kentucky

Reye's syndrome has a biphasic pattern characterized by a sudden change from a mild childhood illness, such as chicken pox, to a rapidly progressive deterioration with vomiting, neurological symptoms and signs, evidence of liver malfunction and finally death. A case and review of the diagnostic criteria is presented.

In 1963, Reye, Morgan and Baral[1] described what appeared to be a new clinicopathological entity in 21 children who, after a relatively minor infection, abruptly deteriorated clinically with manifestations suggesting encephalitis. The findings at autopsy in the 17 children who died were similar. The purpose of this report is to detail the clinical and pathological findings in a child with this syndrome, review the criteria for Reye's Syndrome and call this entity to the attention of the physicians in Kentucky.

Case Report

P. J. was an 8-year-old white girl who was admitted to the Central Baptist Hospital Emergency Room on 2/1/72 at 1:12 a.m. with a temperature of 99.2° and a pulse rate of 152 to 180 per minute. There was a known five day history of afebrile chicken pox and at the time of the admission these pocks were healing. Twenty-four hours prior to this admission she had begun vomiting and was given rectal thorazine. At midnight the private physician was called because the patient began screaming out and acting irrationally, and she was brought immediately to the emergency room where she was given sodium seconal which sedated her. At 5:30 a.m. she began to have generalized opisthotonic convulsions associated with coma. For this she was given dilantin. Her pupils were widely dilated with some reaction to light. Her neck was not rigid between convulsions, and her fundi and optic discs were normal.

On physical examination her temperature was 99°. Her left side was spastic and her right side was moving. Her chest was clear. Reflexes were present on the right side and almost absent on the left side. There was a bilateral Babinski's sign. Tracheostomy with controlled respiration was instituted. At 4:20 p.m. her blood pressure fell to 0 and there was no heart beat. She was pronounced dead at that time on 2/1/72.

The laboratory data included the following:

1. Her white blood cell count was 13,000 per mm^3 with 88% segmented neutrophils, 7% lymphocytes, 5% monocytes. Hemoglobin was 14:7 gm/100ml, and her platelets were adequate.
2. Serum electrolyte values included a sodium, 139 mEq/L; potassium, 4.2 mEq/L; chloride, 97 mEq/L and carbon dioxide content, 19 mEq/L.
3. Her cerebrospinal fluid was colorless and clear with no increased pressure. Its glucose concentration was 90 mg%; chloride, 129 mEq/L.; protein, 26 mg%, with a negative globulin test. No cells were identified.
4. Urine specific gravity was 1.033 with a trace of protein, 1+ Ketones, 1 to 5 red blood cells per high power field, 1 to 5

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white blood cells per high field and occasional hyaline and granular casts.

5. SMA 12/60 values of note were a blood urea nitrogen of 27 mg/100 ml. (normal 10-20 mg/100 ml), uric acid, greater than 12 mg/100 ml (normal 2.5 to 8 mg/100 ml), total bilirubin 1.9 mg/100 ml. (normal less than 1 mg/100 ml), alkaline phosphatase, 245 units (normal 30 to 75), lactic dehydrogenase, greater than 600 IU/L, (normal 100 to 250 IU/L), serum glutamic oxaloacetic transaminase, greater than 250 IU/L, (normal 10 to 50 IU/L), and a normal glucose concentration.

Autopsy Findings

The child was a well-developed, well-nourished, white girl with a moderate number of healing, encrusted pocks on her thorax, abdomen, head and neck, with a few on her extremities. Neither edema nor fluid in pleural, pericardial or abdominal cavities was identified. The thymus weighed 12 gm and was normally located. No gross lesions were identified in the heart. The left lung weighed 120 gm and the right lung 110 gm. Occasional foci of round pale, granular areas surrounded by slight hemorrhage were present below the pleural surface of both lungs in no specific distribution. A Ghon complex was noted in the lower lobe of the left lung with several 1-2 mm gray granules adjacent to it. Only a small amount of mucoid material was present in the bronchi. Except for lymphoid nodules which became more apparent close to the ileocecal valve, no other changes were noted in the gastrointestinal tract. The liver weighed 820 gm. It was tense within the clear capsule and the parenchyma had a striking uniform bright yellow appearance. The cut surfaces bulged and were dry. The spleen weighed 100 gm and the cut surfaces demonstrated subdued trabecula and apparent Malpighean corpuscles. A single calcified nodule was present. The kidneys, pancreas and adrenals were grossly normal. The brain weighed 1330 gm and was tense within the cranium with flattening of the gyri and narrowing of sulci, slight congestion and a generally dry appearance. A suggestion of bilateral uncal impressions and flattening of the medulla into the cerebellum was seen. No focal lesions were identified before or after fixation. All the organ weights were within normal limits.

Microscopically the brain showed supportive evidence of edema but no inflammation, hemorrhage, neuronal degeneration or necrosis. No microscopic abnormalities were noted in the heart, pancreas, adrenals or bone marrow. The liver showed swelling of almost all parenchymal cells with a finely vacuolated cytoplasm and suggestive compression of the sinusoids. The nuclei of the parenchymal cells appeared "watery" but no inclusion bodies, necrosis or inflammation was seen. Oil Red O stains for fat on frozen section material revealed a marked increase in fat in fine droplets throughout the liver in no specific distribution. Fat stains of the kidney showed marked fatty degeneration of the tubules. The granulomatous lesions in the lung and spleen contained organisms compatible with Histoplasma demonstrated by special stains. Histologically the skin lesion was an ulcer, and rare eosinophilic intranuclear inclusion bodies with a peripheral zone of "watery" nuclear material were identified at its periphery. These were compatible with varicella inclusion bodies. The lungs demonstrated focal acute peribronchial inflammation and some reactive hyperplasia of alveolar lining cells. No definite inclusion bodies were seen.

The final diagnoses in this case were: Clinical history of healing varicella; Reye's Syndrome; acute bilateral early bronchopneumonia; and incidental sparse histoplasmosis in left lung and spleen.

Clinical Features

This entity, now called Reye's Syndrome, was first reported in 1963 from Australia by Reye, Morgan and Baral[1]. Since then it has been reported from other parts of the world[2-5]. The clinical and pathological picture in all of these children is strikingly similar, although neither the individual clinical nor pathological features alone is pathognomonic[1-5]. The age of these cases ranges from six months to 12 years with about 85% occurring below six years of age. There seems to be no sex predominance. The children, all previously well, have a history of mild prodromal illness usually involving

the upper respiratory tract, and rarely the gastrointestinal tract. A number of these patients have had recent exposure to measles, Herpes stomatitis and, recently, increasing numbers of cases have been associated with documented varicella — zoster infections[6]. Many of the children are in the process of recovery from this infection (one day—three weeks) only to suddenly deteriorate. This change is characterized by persistant severe vomiting which is sometimes blood stained, followed by coma, with changing, irregular respirations, fever, changing muscle tone and terminal seizures of various types. Papilledema is very unusual and neurologic findings are extremely variable. Some exhibit a characteristic decorticate posture, lying with their elbows flexed, legs extended and hands clenched. Most of the children die within three days of the onset of the coma, although some recover, often without treatment, within 24-48 hours. This rapid improvement is paralleled by the equally rapid restoration of the abnormal laboratory tests to within normal limits and is associated with disappearance of the fatty change in the liver[1]. Those who recover do so without mental retardation. Some of the children have an erythematous, occasionally papular or vesicular, rash which can become excoriated and encrusted[4]. This is relevant to the present case because that rash has been confused with varicella, thus leading to the incorrect impression of varicella with encephalitis. The liver is palpable in only 45% of cases[5].

Laboratory Findings

Most cases exhibit a neutrophilic leukocytosis, which is frequently associated with a metabolic acidosis and acetonuria. The blood sugar usually is low and resists most attempts to raise it. The cerebrospinal fluid demonstrates a normal pressure, no pleocytosis and normal chloride and protein levels. The spinal fluid sugar usually parallels the low blood sugar. The serum glutamic oxaloacetic transaminase (SGOT) and serum pyruvic transaminase (SGPT) are usually elevated and this is of prime diagnostic value in indicating liver involvement. The bilirubin is usually not elevated and slight azotemia is often present. Elevated free fatty acids, low to low normal serum cholesterol and prolonged prothrombin time are also characteristic[5].

Autopsy Findings

The findings at autopsy irrespective of the period of survival from the time of onset of the deterioration are identical. They are usually sparse and limited to the liver, brain, kidneys and sometimes skin. In all cases there is massive fatty change in a liver which is usually of normal size or only slightly enlarged. The gross appearance of the liver is strikingly yellow. Histologically these livers show fine vacuoles in the cytoplasm of the liver parenchymal cells with no displacement of the nucleus and with no predilection for a specific zone of the lobule. Lipids extracted from these livers amount to greater than two times that of matched controls[5]. Foci of necrosis are unusual. Fat vacuoles are also uniformly present in the lining cells of the proximal convoluted renal tubules and loops of Henle, and the heart muscle. The brain shows evidence of cerebral edema but no evidence of encephalitis and meningitis. The skin lesions have already been described.

Diagnosis

Assuming awareness of this syndrome, it should be suspected in children admitted with a diagnosis of encephalitis after a minor illness, in whom the cerebrospinal fluid is clear with normal pressure, no pleocytosis and a low sugar. Evidence of elevation of the serum enzymes usually associated with liver parenchymal disease confirm the diagnosis. It is important to rule out other causes of remediable coma which might produce some of the clinical and laboratory manifestations of Reye's syndrome, such as drug intoxication by salicylates, phenobarbital or other agents[6].

Treatment

There is no satisfactory treatment at present and most cases are fatal, although some patients do recover, often dramatically without treatment.

Discussion

Reye's Syndrome is a pathologic response in children for which a specific etiologic agent

has not been identified[6]. No virus could be identified when specifically looked for. The lack of inflammatory reaction in the brain and meninges speaks against an infectious agent in the central nervous system. Although hypoglycemia is a well known cause of coma, convulsions and cerebral edema, this mechanism does not hold true in all cases. The present patient was not hypoglycemic. The fatty degeneration noted in the liver, kidneys and heart may be nonspecific responses, and it seems that the chemical laboratory findings of hypoglycemia, elevated free fatty acids, prolonged prothrombin time, elevated transaminase, could be secondary to the fatty degeneration in the liver. The possibility of an etiologic relationship to an aflotoxin was suggested in the study from Thailand[5]. Perhaps there is a pathogenetic relationship between the finely vacuolated fatty change in the liver in Reye's syndrome and that associated with the deleterious effect of tetracycline on the liver of some patients, especially some pregnant women[7, 8]. It is probable from all the information available that multiple factors participate in the development of this syndrome.

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Suprapubic Cystotomy†

Arthur J. Donovan, M.D., Thomas J. Ciaccio, M.D. and Walter M. Wolfe, M.D.

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A controlled study of suprapubic catheterization versus urethral catheterization following vaginal plastic surgery is presented. The recent good results we have obtained with the Lowsley technique do warrant further investigation.

DURING the past several years the suprapubic cystotomy, long an accepted urologic procedure, has been introduced into the gynecologist's armamentarium. The procedure was introduced by Cameron in 1963 as the preferred method for postoperative bladder drainage following vaginal plastic surgery. Since that time several authors have performed suprapubic catheterizations on consecutive surgical cases and reported the results. Several advantages have been cited for the use of suprapubic drainage of the bladder. First, the incidence of bacteriuria following vaginal surgery is reduced. Second, repeated transurethral catheterization is eliminated with resultant reduction in nursing care. Third, there is great improvement in patient comfort. It was with these encouraging reports that we began this controlled study.

The primary objectives in this study were the following:

1. To compare the incidence of urinary tract infection in suprapubic and urethral drainage.
2. To determine the acceptance of suprapubic drainage by the nursing staff.
3. To determine the acceptance of suprapubic drainage by the patient.
4. To compare complications encountered with suprapubic versus urethral drainage.
5. To determine the suitability of suprapubic cystotomy as a routine in gynecologic surgery.

Materials and Methods

The study group included 58 patients admitted to Louisville General Hospital for vaginal plastic surgery. They were divided into two random groups: Group I, patients received a urethral indwelling catheter and Group II, patients received a suprapubic cystotomy following surgery. A clean catch or catheterized urine specimen was obtained prior to surgery. A second urine specimen was obtained after five days. The third urine specimen was obtained at the six-week checkup.

Techniques for suprapubic cystotomy:

1. Immediately following the vaginal surgery a Foley catheter was inserted into the bladder with instillation of 500 cc of warm saline solution. In the first several cases methylene blue was added to the saline solution but was later found to be unnecessary. The skin over the lower abdomen was prepared with surgical soap, merthiolate solution and dried with a sterile towel. The area was then sprayed with an aerosol plastic bandage. A small incision was made in the skin 1 cm above the symphysis, at or near the midline. A trocar was then plunged downward until the typical "give" sensation was felt, indicating entrance into the bladder. The stylet was removed and a #16 soft-tipped Pezar catheter was inserted into the bladder. Urine drainage was spontaneous and one suture was placed to close the skin incision and anchor the catheter to the skin. A small dressing was applied and the catheter was connected to closed bag drainage.

2. Due to the complication rate with the trocar method, the Lowsley Prostatic Tractor for suprapubic cystotomy was introduced into the program. The bladder was filled with 300 to 500 cc of warm saline. The Lowsley Tractor was then passed via the urethra until felt under the anterior abdominal wall, tenting the bladder wall. A 1 cm skin incision was made and the incision was carried down to the metal probe. The probe was passed through the incision and a #16 Foley catheter was placed in the jaws of the instrument. The instrument was then pulled back until the tip of the Foley catheter was visualized at the urethral meatus. The catheter was then released and pulled into

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the bladder and the balloon inflated. Urine drainage was spontaneous. One suture was placed to anchor the catheter in place.

In the urethral catheter group following vaginal plastic surgery, a #16 or #18 Foley catheter with a 5 cc balloon was inserted into the bladder. On the fourth postoperative day the catheter was clamped and released at three hour intervals. The Foley catheter was removed on the morning of the fifth postoperative day and the patient was catheterized at 6 p.m. in order to determine the amount of residual urine. The Foley catheter was left in place if the residual urine was greater than 150 cc.

In the suprapubic group, bladder drainage was continuous for the first four postoperative days utilizing a closed system. On the fourth postoperative day the catheter was clamped and released at three hour intervals. The patient was instructed to void normally as soon as possible. Once the patient began to void, the residual urine was measured each time by the patient and checked by the ward personnel. When two consecutive residual volumes were below 55 cc, the suprapubic catheter was removed.

Prophylactic antibiotics were not used in either group. A urine culture was considered as positive when the colony count was 100,000 colonies per milliliter. The patients in whom positive cultures were found at the time of surgery were eliminated from this portion of the study.

Results

In the suprapubic group, 16% converted from a negative culture at the time of surgery to a positive culture on the fifth post-operative day. In the urethral drainage group, 28% of the cases converted from negative to positive culture. Due to the small number of patients in each group, these results are not significant statistically, although there is a trend for a reduction in infection following suprapubic cystotomy.

There was not a significant difference in the length of catheter retention in either group. In the case of Group I, the mean was six and the average 7.8 days; in the suprapubic group, the mean was six and the average 7.3 days.

There were no complications directly related to urethral catheterization in this series. The complications of suprapubic trocar catheterization can be classed into three groups: 1. *Technique failures* occurred mainly before the procedure had been perfected and consisted of inability to insert the catheter into the bladder. There were three patients included in this group. 2. *Nursing care failures*: Two patients pulled catheters out while waking from anesthesia and two catheters stopped draining while the patients were still in the recovery room and had to be removed. 3. *Complications related to the procedure* are the following:

a. Inability to insert catheter.

b. Two patients developed gross hematuria.

c. One patient developed a paralytic ileus on the third postoperative day and a voiding cystourethrogram showed marked extravation of contrast material into the peritoneal cavity.

d. One catheter had to be removed because of pain and cellulitis at the suprapubic site.

e. One failed insertion developed cellulitus at the trocar puncture site.

There was one patient in the series in whom a pelvic kidney was demonstrated on intravenous pyelogram. The possibility of trauma to the renal pelvis with the trocar in a patient with a pelvic kidney must be borne in mind.

All of the above material relating to complications occurred using the trocar method of suprapubic cystotomy. Since that time the Lowsley Prostatic Tractor has been used in *35 cases with only one failure.* This failure involved our first attempt at using this instrument. The patient had gross hematuria and the catheter did not properly function. Since that time we have had no technique failures or complications using this instument. The only significant complication to the Foley catheter use was the inability to deflate a Foley bag. The water was removed by puncturing the bag with a cystoscope and the catheter removed.

Discussion

The suprapubic catheter was well accepted by the patients when the technique was successful. One patient did complain of pain at the suprapubic site. However, when a urethral catheter was inserted, she immediately stated that she preferred the suprapubic catheter which was left in place.

The patients in the urethral group had more

complaints related to the catheter. Usually these complaints were subjective, such as pain at the urethral site or a sensation of pulling on the catheter.

One advantage to suprapubic cystotomy was a reduction in the nursing care necessary once the patient was awake and able to care for the catheter. The suprapubic method eliminated repeated urethral catheterization by the nurses and most of the patients were able to measure their own residual volumes.

There are several factors to be considered when one desires to add a new surgical procedure. The most important factor is the potential hazard of the procedure. Urethral catheterization, if performed properly, should cause no problems with the exception of bacteriuria. There have been reported fistulas from urethral catheterization, but this usually occurs with inexperienced personnel performing the procedure.

Suprapubic cystotomy in all series reported have had complications associated with the procedure, some of which have occurred in our series. The greater number of failures occurs early in the study group prior to technique perfection. Once the technical aspects of the trocar procedure have been perfected one still must contend with complications such as urine extravasation, hematuria, perforation of abdominal viscera and cellulitis of the puncture site. However, since we have used the Lowsley Tractor, none of the above complications have been experienced with exception of the first case which failed. Thus far, the results have been very promising.

The second factor to be considered is the advantage of the procedure. In Group I, 42% of the patients had to have the catheter replaced at least one time because of residual urine more than 150 cc. The total number of catheterizations necessary was 49 in 29 patients for 1.69 catheterizations per patient. This is eliminated by use of the suprapubic cystotomy. When comparing urethral versus suprapubic catheterization, one can readily see that the number of repeated catheterizations is reduced but there is little change in overall length of catheter retention.

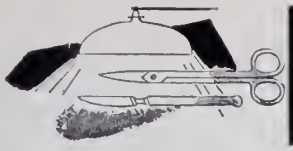
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If you are 35 or older the Kentucky Society for the Prevention of Blindness urges you to have your eyes checked for glaucoma. This blinding eye disease cannot be cured but, with early diagnosis and careful treatment it can be controlled and sight saved. Since you could have glaucoma and not experience pain or other obvious symptoms until it is too late, the Society says those periodic visits to your eye doctor are essential.



GRAND ROUNDS



The University of Kentucky College of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

Strychnine Poisoning

THIS was the first U.K.M.C.H. admission for this 15-year-old, single, female, Caucasian, sophomore high school student from Corbin, Kentucky. She was admitted via the emergency room as a possible "drug overdose."

The patient enjoyed her usual state of good health until the day of admission. Shortly after lunch that day, she experienced a generalized throbbing headache and sweating. She removed a tin from her purse which she thought contained a common over-the-counter analgesic for headache relief. Instead of tablets, the container was noted to contain a fine white powder, a small portion of which she ingested with water. She later recalled the powder's not having tasted "like aspirin usually does." Shortly thereafter, she suffered marked malaise, weakness and nausea. When she began to "shake all over," she was taken to a local hospital where she was observed to have two separate generalized seizures. During one of these fits she became apneic and then cyanotic. She was given I.V. fluids, an injection of Vistaril (hydroxyzine) and 120 mg phenobarbital after the second seizure. She was then transferred to our medical service as a "possible drug overdose."

P.E.: Well-developed, well-nourished young white female who was extremely hyperactive to all tactile and audible stimuli. BP 130/80, P 112 (regular), R 12, T 100.8 (R). Slight horizontal systagmus. Neck supple. Mild diffuse thyroid enlargement. Deep tendon reflexes (and abdominals) were hyperactive (3+ to 4+). No lateralizing signs were detected. Plantar response was upgoing, bilaterally.

Lab Data: CBC: WBC 20,600, normal diff.: Hct 40%; U/A: 4+ protein; sediment contained 1-5 RBC, 5-10 WBC and an occasional granular cast. Urine culture: 100 col/ml *E. coli*. Electrolytes: Na 142; K 3.9; CO 13; cl 111 (mEq/L) BUN 25mg%. Chest films normal.

Toxicology Studies: Serum ethanol, salicylates and barbiturates negative. Trace amounts of strychnine identified in gastric contents sample and in urine. The powder residue from the aspirin container was identified as strychnine by gas chromatography (heroin, morphine, barbiturates and salicylates were excluded from being present in the powder).

Hospital Course: The patient rapidly became more alert and talkative over the next four to six hours. I.V. fluids were continued overnight, and no further seizure activity was noted. By the morning after admission, the neurologic signs had resolved. Psychiatric interviewing resulted in a diagnosis of "depressive neurosis in a passive-aggressive personality." Family therapy was recommended at a Comprehensive Care Center in the patient's home county.

Strychnos nux-vomica is the term which refers to the seeds belonging to a certain tree most native to the country of India. Correctly translated, "vomica" means "depression" or "cavity" (and not "emetic") and is descriptive of a characteristic impression on the surface of the seed. The dried, ripe seed has been shown to contain roughly the same amount (1.0 to 1.5%) of each of its two alkaloids, strychnine and brucine. However, *nux-vomica's* toxicity has been demonstrated to be directly proportional to its content of its principal alkaloid strychnine and not to brucine[9].

Historically[9], strychnine is said to have been used first as a vermicide in the early part of the 16th Century in Germany, and it is still used today in certain commercially

available vermicides and rodenticides in most every part of the world. Following its introduction as a vermicide, some 200 years passed before strychnine enjoyed any significant popularity in widespread use as a "medicinal" in the area of medical pharmacologic therapeutics. It has since been used for a variety of pharmacologic purposes, including that of a stimulant (tastebuds, gastric secretions and sexual), a tonic and a cathartic. Even today, certain over-the-counter laxative preparations and prescription aphrodesiac drugs are listed as containing various amounts of *nux-vomica,* commonly as the principal active ingredient[1, 9]. These "medicinals" serve as one of the major sources of modern day strychnine poisonings; this especially having been proven to be the case in accidental poisonings among young children. Murray, some years ago, published his data concerning 60 cases of childhood poisonings collected over a consecutive six-year period. He found strychnine poisoning to account for one-quarter of the total cases and for nearly one-half of all the deaths[5].

It should be noted that although most cases of strychnine poisoning have been accidental and among younger-aged children, many cases of accidental and suicidal poisonings have been reported in the adult age group[1, 13]. Filling the gap between older adults and younger children is, in our modern, drug-oriented society, that remaining age group among whom many participate actively in the consumption of a whole host of illegally obtained narcotics and dangerous drugs. Among these drugs both stimulants and hallucinogenics are widely used. I have been given to understand by certain local legal and medical investigators in this field that, all too commonly, strychnine is added in variable and unmeasured quantity to these drugs by the seller prior to distribution and sale. This substance is purportedly used to give the ingested drug(s) an added "stimulant and mind-bending" effect. Thus, the potential gravity of the threat of strychnine poisoning can be realized when one sees virtually every age group in the population as being exposed.

Pharmacology

The pharmacology of strychnine has proven to be interesting, even perhaps if not always understood completely. This substance has long been identified as a quite powerful convulsant. Unlike certain other convulsant drugs, strychnine does not act directly on muscular tissue. Rather, it apparently acts indirectly and at the spinal cord level. It is of interest also, that, while the average mean lethal dose in humans is somewhere in the range of 100 to 200 mg, as small a dose as 16 mg has been fatal, and a dose of only 30 mg has been shown to be potentially life-threatening. Nevertheless, the literature cites one case in which survival occurred following ingestion of a dose as large as 2 gm[9].

The major metabolism of strychnine appears to occur in the liver, nearly all of the poison having been ridded from the body in 10 to 12 hours after ingestion. In addition, the kidneys are able to excrete up to one-fifth of a non-lethal dose. This apparently serves to explain the observations that a total amount of strychnine equal to two lethal doses can be given slowly within a single 24-hour period in the absence of any overt signs of toxicity[9].

Mechanism of Action

Admittedly, the true mechanism of action of strychnine probably still remains unknown, even today. It was Magendie in 1819 who was first to publish experimental data showing that the principle site of action of strychnine resided at the spinal cord level[6]. This substance was demonstrated not to be a convulsant itself, but, rather, to act in some manner on the spinal reflex pathways in such a way as to cause increased neuronal excitability and overactivity. Much later, the popular thought was that its mechanism of action was through inhibition of the enzyme acetylcholinesterase with the consequent accumulation of the chemical transmitter, acetylcholine[10]. However, the work of Wescoe and Green in 1948 clearly disproved this idea by demonstrating a lack of atropine antagonism to the effects of strychnine on the spinal cord[7].

More recent investigations have shown that strychnine in some way blocks post-synaptic membranes of spinal motor inhibitory neurons[14]. This action is thought to occur via the drug's competitively blocking some unidentified type of inhibitory chemical at the post-

synaptic level[6]. This selective interference in turn allows an increase in activity in those neuronal pathways with systems of direct inhibitory feedback; i.e., skeletal sensory-motor pathways. Further laboratory investigations have apparently demonstrated that this inhibition does not involve the so-called "Renshaw Cell" synapse (i.e., the spinal motor neuron collaterals)[9]. Lacking any similar mechanism of direct inhibitory feedback, the autonomic nervous system is spared by the usual toxic doses of strychnine. As a rule, the skeletal extensor muscle groups predominate in the excessive neuronal stimulation produced by strychnine's action.

Symptoms

Clinically, the pattern of events resulting from strychnine poisoning is quite characteristic. A most interesting and well-written account of a classical case of strychnine poisoning was published by R. J. Rogers in the British literature in 1865[13]. Subsequent to the ingestion of this alkaloid, symptoms usually begin to appear within 60 minutes, the average time typically falling in the range of 10 to 30 minutes. Either one of two events then occurs: the first symptom may be in the form of a sudden, violent fit without any warning; or a similarly violent convulsion may follow a prodromal period characterized by nausea, vomiting and excessive sweating. Shortly thereafter, nearly any type of even the mildest visual or tactile stimulus is capable of triggering a characteristic chain of events which terminate in a series of violent convulsions. The stimulus first causes a transient clonic phase leading to a sudden spasm of nearly all skeletal muscles. The extensor muscles quickly predominate in the seizure activity, producing a body held rigidly in that same posture described in "spinal convulsions;" i.e., the head thrown backwards, the arms and legs extended, and the back arched in fullest extension (opisthotonus); trismus occurs, and "risus sardonicus" is prominent[9, 11, 13].

Each fit lasts anywhere from one-half to two minutes, is associated with apnaeic spells, and cyanosis results. The unfortunate victim of these fits apparently remains fully conscious throughout each of these, is quite apprehensive and is markedly fearful of impending death. Being fully conscious, the victim is made to suffer a great deal of pain with each vehement seizure. The convulsive episodes are typically interspersed with 10 to 15 minutes of rest. The total number of convulsions can vary from one to ten or so. When death occurs, it is usually by the fourth or fifth seizure episode; the latter almost always occuring within a one to three hour period following the initial ingestion of the poison. Death itself is caused by a combination of central nervous system medullary center depression and prolonged anoxia followed by asphyxiation (resulting from paralysis of the diaphragm and accessory respiratory muscles). The overall prognosis is said to be good for those victims able to survive the first four to six hours, and, evidently, no sequelae of any import has ever been noted among such known survivors[11].

Whenever faced with a case of possible strychnine poisoning, one must include in his differential diagnosis certain other clinical disorders which can present in a similar manner and be mistaken one for the other. These disorders include classical epilepsy, phenothiazine toxicity, tetanus, meningitis, any other drug or chemical which in toxic doses produces seizure activity (e.g., isoniazide), and lastly (but certainly of equal importance) is hysteria (conversion reaction)[6, 11]. Once these other disorders are reasonably excluded, one must proceed with vigor towards the implementation of appropriate therapy.

Therapy

Swissman and Jacoby in 1964 outlined four major objectives concerning the most efficacious mode of therapy in cases of strychnine poisoning (also applicable in many other types of poisonings)[6]. These are as follows: (a) immediate control and continued prevention of the seizure activity; (b) prevention of anoxia and asphyxiation; (c) elimination from the body of any unabsorbed poison and (d) general supportive therapy (including psychiatric evaluation whenever appropriate) and good nursing care. Obviously, the first two of these must be accomplished rapidly, simultaneously and prior to the institution of the second pair.

The primary aim of the early control and continued prevention of this particular type of violent seizure activity is that of protection of the medullary centers of the brain from excessive stimulation as well as from death due to anoxia. By and large, the mainstay of anti-seizure therapy over the years has resided with the use of parenteral barbiturates[6, 9, 11]. However, in more recent years certain other types of drugs have been reported to be of equal or even greater value. When using a barbiturate, one of the more rapid-acting ones is chosen (e.g., thiopental or pentobarbital). The drug is then given by slow intravenous push in doses up to 500 mg until the seizure activity is controlled. Adequate blood levels can subsequently be maintained by titration of intramuscular doses at appropriate intervals[6, 11]. The major limiting factor in the use of barbiturates is that often such large doses will be required to control the convulsions, severe central nervous system depression becomes an equally grave problem.

In 1956, Jacoby and Boyle[4] reported the successful use of a muscle relaxing agent, mephenesin, in a case of strychnine poisoning. Their clinical use of this drug has been promoted by an earlier report in the literature by Berger[15, 16] who presented laboratory evidence that the antagonism between strychnine and mephenesin was more complete than that between strychnine and a certain short-acting barbiturate. The advantage of mephenesin over barbiturates was the lack of central nervous system depression. The former's advantage over curare-type drugs, was that, unlike curare-type drugs which acted at the myoneural junction, it acted at the level of the internuncial neuron in the spinal cord (strychnine's action also being in the spinal cord) and was thought to act more directly by inhibiting neuronal transmissions. A later report[6] in 1964 by Swissman and Jacoby again cited the advantages of mephenesin over certain other types of muscle relaxing drugs, as well as over barbiturates. Obviously, the disadvantage in the use of curare-like, neuromuscular blocking agents lies in the inherent necessity to intubate the patient and support his ventilation with a machine.[1] It has also been pointed out that the use of morphine in strychnine poisoning is contraindicated since morphine depresses the medullary centers and also acts as a spinal cord stimulant[11].

The first report in the English literature of the successful use of diazepam (Valium) in a case of strychnine poisoning was published in recent months in the pediatric literature by Maron, Krupp, and Tune[12]. An 18-year-old girl was treated with intramuscular diazepam and recovered fully. Well-known to most everyone is the safety and efficacy of the use of this drug in a number of different clinical problems. Among its various properties are its tranquilizing effect and its muscle relaxing and anticonvulsant effects. Their choice of this drug for the treatment of strychnine-induced seizures was based primarily on the theoretical pharmacologic interrelationships between the two drugs. The mechanism of action of diazepam was cited as being one of a direct suppressive effect on spinal cord reflexes. This was thought to occur through a selective enhancement of presynaptic inhibitory mechanisms, thereby opposing the stimulating action of strychnine on post-synaptic reflex pathways[12, 17]. Although diazepam would appear to be one of the more "ideal" and specific drugs for treating this type of seizure activity, more experience needs to be gained in its use in this regard. It certainly has the advantage over barbiturates of being much less potent in its central nervous system depressing effects. However, an infrequent, but undesirable, side effect seen with the use of diazepam is that of transient episodes of apnea. Still, the overall respiratory depressant effects of diazepam are not nearly so profound as those due to the barbiturates.

Once the convulsions have been brought under control, the prevention of asphyxia is much less a problem. Prime consideration must always be given to this aspect of therapy. The airway must be maintained clear at all times, and, whenever necessary, ventilation must be assisted with intubation and mechanical ventilation. The latter also aids in the prevention of aspiration of gastric contents with the resultant well known complications of aspiration pneumonitis.

The third aspect of therapy, that of ridding the body of the poison not yet absorbed, can next be undertaken. If the patient is alert, an

emetic such as syrup of ipecac can be tried. However, in most cases the most efficacious mode of therapy will be that of gastric lavage. The latter can be performed with a solution of iodine (1:200) or a dilute solution (1:5000) of potassium permanganate. This procedure can subsequently be complimented by the ingestion of several (6 to 8) teaspoonfuls of activated charcoal with water.

The final aspect of the treatment program is that of general supportive therapy. This consists of the usual intravenous administration of electrolyte solutions and dextrose in water. Anti-nauseants are given as necessary. Finally, careful attention must be given to decrease as much as possible all unnecessary tactile and visual stimuli. This is best accomplished by placing the patient in a quiet, warm and darkened room.

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JACK RAYMON COYER, M.D.
CLINICAL INSTRUCTOR IN MEDICINE

Amblyopia, or "lazy eye," is among common children's vision problems which to be most successfully treated should be detected before age six. The Kentucky Society for the Prevention of Blindness urges all parents to have children's eyes professionally examined early in the preschool years, preferably by age four, to catch possible vision defects before they become serious.

Over 10,000 Kentucky preschool youngsters are screened annually for amblyopia "Lazy eye" and other vision defects . . . by the Kentucky Society for the Prevention of Blindness. Your dollars make this sight-saving program possible.



The Flexners of Louisville†

ABRAHAM M. GORDON, M.D.

IN THE year 1910 American medicine altered course. With publication of the Flexner report a new era began; an era that would launch the golden age of American medicine. I have chosen the Flexner family as my subject. I can add but little to what is already known, except I have known the Flexners. Their story is worth telling as we in the United States enter into the thick of new changes—changes that will once again alter American medicine in the 1970's, just as did Flexner 60 years ago.

Published by the Carnegie Foundation For The Advancement of Teaching, Bulletin Number Four, or the Flexner Report, as it came to be called, held a mirror to the face of American medicine. Few liked what they saw. Students attending medical school, more often than not, were enrolled at "mere diploma mills, where poorly qualified students were indoctrinated by oratorical lectures . . . to continue the same low level of medical care practiced by their unqualified teachers." This indictment had an immediate and salubrious effect. Within a year one medical school after another closed its doors. Schools that could be salvaged were reorganized along lines suggested by Flexner. And at this very same time Simon Flexner, Director of the Rockefeller Institute for Medical Research, was adding lustre to the family name. But let us begin with Moritz Flexner, the first to come as an immigrant to these shores, over 100 years ago.

Moritz Flexner was born in Bohemia in 1820. Here opportunities are limited for those of his faith. At 14 he is sent to Strasburg to live with Rabbi Joseph Flexner, an uncle. In 1953 he leaves France for the New World, his final destination, French-speaking New Orleans. Before he has settled in his new home, Flexner is struck down with yellow fever. He almost dies. Thanks to a strong constitution and the devoted Sisters at the Charity Hospital, he slowly regains his health. In 1854 we find him in Louisville. He begins as a peddler. As his lot improves he marries Esther Abraham, a native Rhinelander. She produces nine children, seven boys and two girls. Flexner has little financial success and with his death in 1882 he leaves a widow with small children.

Jacob Flexner is the eldest of nine. He operates Flexner's Pharmacy at Fifth and Market Streets. Business prospers and each of the young Flexners in turn finds employment here. Local physicians have made his pharmacy a favorite meeting place and it is here that young Simon Flexner decides on a career in medicine. Abraham Flexner finds a medical career less to his taste. His ambition is to become an educator and teacher. The years go by and after 20 years Jacob Flexner fulfills a lifetime ambition. He earns an M.D. degree and begins a new career. In 1919 he is joined by his son, Morris, and the two are together until the death of Jacob Flexner. Before his own death in 1969 Morris Flexner offered suggestions in preparing this manuscript and had directed me to source material. Speaking of his father he once told me, "Of all the Flexners, the most able, the most intelligent, and gifted was my father, Jacob Flexner." Filial pride? Abraham Flexner agreed with this evaluation when in 1940 he writes of Jacob Flexner with deep affection and pride.

Abraham Flexner was born in Louisville on November 13, 1866, the sixth of nine children. Educated in Louisville he entered Johns Hopkins University and earned his A.B. degree in 1886. Reading his autobiography one learns how poorly prepared he was on entering the University. It was at Hopkins that Flexner developed his ideas about learning and teaching, much of it based on his own experience. These

†*An address given September 2, 1970, at the XXII International Congress for the Study of the History of Medicine, Bucharest, Romania*

ideas he would later employ in his own school. On graduation he returned to Louisville and a teaching post at the Louisville Boys High School. Later he opened a private school for University bound students. His success was beyond his fondest hopes. He could have spent the rest of his days as a teacher, instead he felt the need to complete his own education. Flexner, no longer young, closed his school and enrolled at Harvard where he earned a Master's degree. This he followed with an LL.D. from Berlin University. In 1908 he was invited to join the Carnegie Foundation for the Advancement of Teaching. His first assignment was to study medical education in the United States and Canada. With his usual energy he visited every medical school north of the Rio Grande. He would spend no more than a day or two at each school. He asked routine questions and after a brief visit to the different departments, he had what he was after. What he found was scandalous.

Many schools were operated as profitable business ventures. Admission standards were loose and often non-existent. So-called laboratories were hardly worthy of the name. Research was totally neglected. Flexner was criticized by some for his lack of credentials as he was neither a physician or a scientist. In the end he prevailed. The time for reform had come and those against change were swept away.

In 1912 Flexner published his report on medical education in Western Europe. Using methods he employed earlier in America, he found much to praise in the German system. Germany was then leading the world in scientific research. His recommendations found favor with the English. Two World Wars plus the English tendency to "muddle through" have slowed these reforms to a halt. In France, where all foreigners are suspect, little has been accomplished.

In 1930 Flexner founded the Institute For Advanced Study at Princeton. Funded by the Bamberger family, the Institute became a haven for displaced teachers and scientists. Albert Einstein was a member of this faculty, which included other famous Europeans. Their contribution to America and the American war effort in the second World War cannot be measured.

In his last years universities bestowed their highest honors on Abraham Flexner. With retirement he spent his last days near Washington D.C. and here he died in his 92nd year, on September 21, 1959.

Simon Flexner was born on March 25, 1863. Educated in the Louisville schools he received his M.D. in 1889 from the University of Louisville. To quench his thirst for learning, Simon Flexner left Louisville for postgraduate work at Johns Hopkins, under the renowned William Henry Welch. Later he journeyed to Europe and studied at Prague, Strasburg, Berlin and the Pasteur Institute. On his return he taught at Hopkins and Pennsylvania before accepting the position of Director of Laboratories at the Rockefeller Institute for Medical Research. He would spend the rest of his productive years at the Institute attaining the position of Director in 1920.

Infectious diseases were the pressing medical problems in the early 20th Century. Flexner devoted himself almost exclusively to research in this area. He became an expert on poliomyelitis and wrote extensively on its cause, mode of transmission and prevention. Plague, encephalitis, tuberculosis, syphilis and natural resistance were subjected to his diligent attention. While in the Philippines he isolated a new organism from a case of bacillary dysentery. The bacillus was named for its discoverer, Shigella flexneri. He was among the first to study snake venom. Early in his career Flexner described experimental panereatitis and fat necrosis.

In 1937 Simon Flexner came home to address the 100th graduating class of the medical school at the University of Louisville. His fame was now worldwide. Governments and universities vied with each other in bestowing their highest honors upon him. He died on May 2, 1946. The world mourned his passing.

The Flexners of Louisville are a distinguished family. They have made their mark as lawyers, business men, poets, mathematicians, historians and physicians. A few of old Moritz Flexner's descendants have achieved fame in their chosen pursuits and professions. Yet for those of us in American medicine the name Flexner holds a special place. They have earned for themselves a station in our medical Pantheon. A place reserved for those medical teachers and scientists who have lighted the way for untold generations.

Blue Shield—Blue Cross

JOHN S. HARTER, M.D.

THERE is a considerable lack of understanding by many doctors about Blue Shield. David Hull, M.D., Chairman of the Board of Trustees of the KMA, initiated a meeting between the Directors of Blue Shield and the Trustees of KMA on July 6, 1972. The staff of Blue Shield did an excellent job of explaining the workings of Blue Shield. We all believe that such a meeting should be held each year and that the county officers should be involved in order to spread the information to every physician each year.

Mr. Avil L. McKinney's talk on Prepayment Programs, Benefits, Limitations and Exclusions and Government Contracts covered the area that causes most of the confusion so concisely that I believe some of it worth repeating here.

"In 1949, Blue Shield started business with a Standard Certificate of Membership which really was a $150 indemnity schedule with some procedures expanded up to $225. The medical rider with Standard begins to pay $5 per day for 27 days after the third day of hospitalization. Today, only 20,642, or 5.4% and only 13,133, or 3.5%, of the $300 maximum Preferred Certificate remain on our books.

"The bulk of our business in Blue Shield is with our Professional Services Index (PSI) Schedule C and D. A total of 52,536, or 13.8% of our enrollment is under Schedule C, the $270 Schedule; and 219,646, or 57.8% are under Schedule D, our $405 Schedule. We now have 35,308 UCR contracts, or 9.3% with another 8% in the Federal Employee Program and the South Central Bell contract.

"The trend today is not indemnity. Most demands and desires are aimed toward the UCR concept and if there is not enough money to buy a full 100% UCR Program, we are being asked to market a per cent of UCR. An example of this type contract is the one which becomes effective for the entire Bell System throughout the United States which pays 80% of the usual, customary and reasonable charges. The reason for this trend is academic. Indemnity schedules become obsolete in their relation to actual charges. In addition to these base certificates we market a number of riders and endorsements to add specific benefit levels and, of course, over 50% of our members now have the Extended Benefit or Major Medical contract in addition to basic coverage. More than 80,000 over-65 Kentuckians are enrolled in Blue Cross and Blue Shield 65 to supplement Medicare.

"In our sales descriptive folders, we print in blue ink the covered services and in red ink the exclusions. Time will not permit a complete description of all benefits and exclusions, so let me explore four of the major exclusions for you.

I. BLUE CROSS CERTIFICATES

A. *Diagnostic Admissions*: With few exceptions, the Kentucky Blue Cross Certificates of Membership exclude benefits for Hospitalization which is primarily for x-ray examinations, laboratory examinations, basal metabolism tests, electrocardiography, physical therapy or hydrotherapy. In three types of cases, Blue Cross will seek the advice of the Medical Director and may also turn to the appropriate committee of the Kentucky Medical Association for assistance. The following is the Blue Cross corporate policy on this exclusion:

1. It is not intended that Blue Cross Certificates deny benefits to any member who has a reasonable medical need for inpatient hospital care. It is intended that benefits for inpatient admissions be excluded to a member who is admitted for diagnostic procedures when medical circumstances would allow the necessary work to be done in the hospital outpatient department or in the physician's office or other outpatient diagnostic facilities.

2. Benefits will not be paid when the member is admitted for diagnostic procedures as a matter of convenience, or because it is hoped that in this way he may obtain benefits that are not available to him in the outpatient department or in the doctor's office, and when he is not in need of inpatient hospital care for treatment of his illness. Declarations that a diagnosis had already been established, and that the patient was admitted to perform studies to verify the diagnosis prior to outlining the course of treatment cannot be accepted as justification for Blue Cross coverage.

3. Benefits will be paid when the member is hospitalized for diagnostic procedures which, in themselves, necessitate inpatient care.

4. Benefits will be paid when the member is admitted because he is ill to a degree requiring hospital care and observation, even though his condition is not fully diagnosed at the time of admission.

B. *Pre-existing Conditions*: Both Blue Cross Standard and Comprehensive Certificates of memberships, and all Blue Shield Certificates, exclude benefits for pre-existing conditions:'Any benefits during the first 12 months for illness or conditions existing on or prior to the effective date of this certificate whether known or unknown.'

Exception—Blue Cross and Blue Shield members, in some groups, have a waiver of the pre-existing condition exclusion and pay extra dues for this waiver. We also waive this exclusion when Blue Cross and Blue Shield enroll a group which is changing to our coverage from a commercial carrier. The pre-existing condition has been necessary in providing some con-

trol to prevent selection by applicants who, if the condition were not excluded, would be using other members' dues to pay for their existing condition. An automobile policy will not pay for a dented fender which occurred prior to the effective date of the policy; nor can a fire insurance policy pay benefits for a house that burns prior to the effective date of the policy. We do not exclude pre-existing conditions forever, but do place the one-year restriction unless otherwise waived.

C. *Obstetrical Care—'Waiting Period'*: Under both the Standard and Comprehensive Blue Cross certificates, and Blue Shield, an eligible female member is not entitled to benefits for obstetrical care or for treatment for conditions of pregnancy until after she has been a continuous member for nine months or longer on a family membership.

Premature deliveries are not subject to waiting periods when the baby normally would have been born after the waiting period.

Exception: (1) Married couples, both of whom had single memberships in good standing prior to marriage, are eligible for maternity benefits nine months from the effective date of the newest single membership, provided a family membership is in effect at the time of delivery. (2) Blue Cross and Blue Shield members, in some groups, are paying additional dues for obstetrical care coverage on a single membership. (3) Also, some members are paying additional dues for a waiver of the obstetrical care waiting period. In this case, the members are eligible for obstetrical care upon the effective date of their family membership. (4) The equal Employment Opportunity Commission may in the future require maternity benefits to be furnished by an employer to a single female employee, if the employer is contributing toward the cost of the program that provides maternity benefits for the wife of a male employee. The theory is that it would be discriminatory to offer a fringe benefit to the wife of a male employee that is not also offered to a single female employee. This is a recent ruling and our legal counsel is carefully studying it at the present time to determine what impact this may have on health programs.

D. *On-The-Job Injuries*: All Blue Cross and Blue Shield Certificates of Membership exclude: 'Services for any condition, disease, ailment or accidental injury arising out of and in the course of employment, whether or not the member claims compensation or receives benefits for hospitalization or other benefits thereunder, and whether or not any recovery is had by the member against a third party for damages resulting from such condition, disease, ailment or accidental injury.'

In the State of Kentucky, the Employer Liability Law requires an employer with three or more employees to be financially liable for on-the-job injuries. He may insure his liability through the purchase of Workmen's Compensation Insurance, since this is a law. Blue Cross and Blue Shield exclude on-the-job injuries from our certificates so that we will not be duplicating that which is required by law.

In addition to exclusions, certain limitations are contained within the contracts. Financial stability of the Plans, ability to pay by the purchaser, predictability of costs and other criteria make them necessary.

Basic Certificate Days: The Standard and Comprehensive Blue Cross certificates limit coverage to 70 days on inpatient care for each hospital confinement. Successive hospital confinements are considered continuous and constitute a single confinement if discharge from and readmission to the hospital occurs within a 90-day period.

Blue Shield's in-hospital medical riders are usually issued to conform to the number of days for which the member is entitled to inpatient care in a hospital for each confinement.

Exception — Some Blue Cross and Blue Shield members are paying additional dues to increase the days of coverage up to 120, 365 or 730 days per confinement.

Obstetrical Care Days: The Standard and Comprehensive Blue Cross certificates provide benefits for obstetrical care under a family membership. Coverage for obstetrical care or for treatment for conditions of pregnancy is limited to ten days of inpatient care.

Exception—Blue Cross members, in some groups, are paying additional dues to increase the basic certificate to 70, 120, 365 or 730 days coverage for obstetrical or related care.

Nervous and Mental Disorders: Both Blue Cross Standard and Comprehensive Certificates limit benefits for care of nervous and mental disorders from 31 days per lifetime to a maximum of 365 days per admission. In these types of cases Blue Cross will seek the advice of the Medical Director and may also turn to the appropriate committee of the Kentucky Medical Association for assistance.

Exception—Blue Cross members, in some groups, are paying additional dues for more comprehensive coverage in this benefit area. Benefits may range from minimum coverage to 365 days per confinement.

Blue Shield's Usual, Customary and Reasonable Program provides for psychiatric illness as a paid-in-full benefit just as it does other covered services.

Tuberculosis: The Standard and Comprehensive Blue Cross certificates exclude coverage for: 'Hospital services for the treatment of pulmonary tuberculosis after a clear diagnosis of such.'

Exception — (1) Blue Cross and Blue Shield members, in some groups are paying additional dues for more comprehensive coverage in this benefit area. (2) Surgical treatment for tuberculosis in a short-term, general hospital is given individual consideration, and may be covered.

Medical Necessity Clause: The medical necessity clause is included in the Standard and Comprehensive certificates. It states: "Blue Cross Hospital Plan, Inc., may at any time prior to, during or subsequent to the hospitalization of a member require a certification from the attending physician that admission to the hospital, treatment rendered, and/or continued hospitalization is/was a medical necessity. Hospital charges incurred not so certified by the attending physician shall be borne by the patient. Blue Cross

(Continued on Page 718)

EDITORIALS

Annual Meeting Time Approaches

KMA is one of the very few state medical associations which can boast each year, that near 50% of its membership has registered for its Annual Meeting. The 1972 meeting, next week, should bc no exception.

There may be, and probably are, many factors contributing to the remarkable record of attendance, of which we are so justly proud. Chief among these factors, many of us believe, is the consistent excellence of the scientific program. Again, 1972 promises to be no exception.

Guest speakers from 12 states, ranging from California to New York and from Florida to North Dakota, will join with many of our own members in presenting four general sessions and 17 specialty sessions, bringing to us the latest in clinical medicine—truly continuing medical education at its best. The noteworthy scientific exhibits, as well as the technical exhibits, add to the pleasure and the benefits to be gained by attending this meeting.

Special features of this year's Annual Meeting deserve our attention. The President's Luncheon, on Wednesday, features the installation of our new president, the presentation of KMA's highest awards, and a renowned humorist as guest speaker. The KEMPAC Dinner on Monday evening at the Stouffer's Inn promises to be most atrractive in this election year with Louie Nunn and Dee Huddleston, candidates for the Senate, being the featured speakcrs.

Lest we lose sight of the "business" side of the Annual Meeting, the House of Delegates will hold it ssessions on Monday morning and Wednesday evening. This is the policy-making body of KMA and, although only certified delegates have the privilege of the floor and the right to vote, any member of KMA in good standing may attend these sessions as well as the reference committee meetings on Monday afternoon.

The Nominating Committee will meet on Monday, following the first session of the House of Delegates, to select candidates for President-Elect, Vice-President, Secretary, Treasurer, Delegate and Alternate Delegate to the AMA, and five Trustees. The candidates will be announced on Tuesday, and the election held on Wednesday evening.

The Board of Trustees will hold four meetings between Sunday and Thursday.

All of these activities—both scientific and business—are dedicated to the best interests of the physician, the profession and the citizens of Kentucky.

Yes, Your KMA is due for a busy week!

Will you be a part of it?

You should!

HENRY B. ASMAN, M.D.

Sam A. Overstreet, M. D.

HOW can we do justice, in the space available to us, to the man who has been a part of this *Journal* for so many good years? A leader, a physician, a writer, an institution, an inspiration—a man who, over thc last 17 years, has in part or in wholc just about **been** the KMA *Journal*. A doctor from Jessamine County who has known well, throughout a long and still vigorous career, hundreds of Kentucky physicians. A leader who has been President of the Jefferson County Medical Society and thc Kentucky Medical

Association, as well as Governor of the Kentucky Chapter of the American College of Physicians. A teacher who compiled, for example, an impressive and concise monograph on gastroenterology as an aid for his students of medicine. A father whose unswerving faith in the essential nobility of medicine is evidenced by the pride he takes in the choice of career of his three physician-sons. A writer whose wide-ranging intellect has been displayed for our benefit in these pages, over a great length of time and in truly amazing quantity.

Sam Overstreet is this month, at his request, leaving the staff of this *Journal* after 17 years of uninterrupted service. We shall miss his humor, his wide knowledge, his judgement. As editors, we shall miss his ability and enthusiasm for expressing himself in writing—just how much we shall miss him can perhaps be deduced from a review of his KMA *Journal* offerings, listed below. Many, many thanks, Doctor O!

THE EDITORS



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ORGANIZATION SECTION

Journal Editor for 17 Years, Dr. Overstreet Resigns

Sam A. Overstreet, M.D., Louisville, has resigned from his position as assistant editor of *The Journal* of KMA after 17 years of service on the editorial board.

A past editor, scientific editor, associate editor, and the author of over 140 editorials, Doctor Overstreet has worked continuously with *The Journal* since 1955.

The Board of Trustees has appointed A. Evan Overstreet, M.D., Louisville, to replace his father as assistant editor. Reappointed to a second term were Walter I. Hume, Jr., M.D., as editor; Henry B. Asman, M.D., as associate editor, and Charles C. Smith, Jr., M.D., as scientific editor.

The September, 1972, issue of *The Journal* is dedicated to Doctor Sam Overstreet, his accomplishments in the field of medical journalism, and his service to this Association.

KMA President during its Centennial, 1950-51, Doctor Overstreet has been active in many medical organizations, the Jefferson County Medical Society, the American College of Physicians and the Southern Medical Association. He served two terms on the State Board of Health and has been a member of the KMA Advisory Committee to Blue Cross, Advisory Committee to Selective Service and Awards Committee. He is presently on the Board of Directors of KEMPAC.

1972 U.S. Senate Candidates To Speak at KEMPAC Mtg.

Kentucky's two candidates for the U. S. Senate will be the featured speakers at the Tenth Year Anniversary Celebration of KEMPAC on Monday, September 18.

Walter "Dee" Huddleston (D-Elizabethtown) and Louie B. Nunn (R-Glasgow) will discuss "Campaign '72" at the Seminar program held at Stouffer's Louisville Inn.

KEMPAC Board Chairman, Fred C. Rainey, M.D., Elizabethtown, has announced that a reception followed by a dinner and the Seminar, will begin at 6 p.m. in the Grand Ballroom.

Currently serving as State Senator from Hardin and Larue counties, Huddleston is a University of Kentucky graduate and is general manager of radio station WIEL in Elizabethtown. Last year he served as state campaign director of the Democratic Party



Mr. Huddleston



Mr. Nunn

and has twice served as Majority Floor Leader of the Kentucky State Senate.

Elected Governor of Kentucky in 1967, Nunn attended the University of Cincinnati and received his law degree from the University of Louisville in 1950. A practicing attorney, he served as state campaign chairman for the Republican Party in 1956, 1960 and 1962 and was Barren County Judge for four years.

The KEMPAC Board of Directors urges everyone to make plans now to attend and help celebrate this gala affair.

Many Special Features Part Of '72 Annual Meeting

An excellent scientific program will be one of the highlights of the 1972 KMA Annual Meeting, September 19-21, 1972, at Louisville Convention Center.

Physicians from across the nation and from Kentucky will be featured speakers for the program, dealing with such subjects as respiratory distress, trauma, atherosclerosis and diabetes. Seventeen specialty groups will be meeting on Tuesday and Thursday afternoons, beginning at 2 p.m. The Anesthesiologists, Chest Physicians, OB-GYN Society, Orthopaedists, Pediatricians, Radiologists, Urologists and Plastic Surgeons will be meeting Tuesday, September 19. On Thursday, September 21, the EEN&T, Dermatologists, Family Physicians, Internal Medicine, Pathologists, Public Health, Psychiatrists, Surgeons and Industrial Medicine will hold meetings.

Scientific and technical exhibits will be housed in the Louisville Convention Center also. The business details of the annual session will be held at Stouffer's Louisville Inn. A shuttle bus service will be provided for your convenience in getting to and from various aspects of the meeting.

On Wednesday, September 20, at 11:50 a.m., the

President's Luncheon will be held in Grand Ballroom at Stouffer's Inn. Mark Russell, political satirist and entertainer, will discuss "Politics Is A Laughing Matter." The KMA Awards will be presented during the Luncheon as well as the installation of KMA President, Lee C. Hess, M.D., Florence.

Other features of this year's meeting include two meetings of the KMA House of Delegates, the annual convention of the Woman's Auxiliary to KMA, an Orientation Program for new members, KEMPAC Seminar and alumni reunions of the University of Louisville School of Medicine.

Miscellaneous Mtgs. Planned During KMA Annual Session

Several miscellaneous meetings have been scheduled during the KMA Annual Meeting. The time, date and place of meetings planned at press time are listed below.

Sunday, September 17

12:30 p.m. KMA Board of Trustees, Luncheon Meeting, South Room A, Stouffer's Inn

Monday, September 18

9:00 a.m. KMA House of Delegates, Meeting, Ballroom B, Stouffer's Inn

12:30 p.m. Reference Committee Chairmen Luncheon, Ballroom A, Stouffer's Inn

2:00 p.m. Reference Committee Meetings, Hunt Room, Sycamore Room, South Rooms A & B, Bienville South Room, Tack Room, Ballroom A, Stouffer's Inn

5:00 p.m. Kentucky Academy of Family Physician Insurance Commission Meeting, Sycamore Room, Stouffer's Inn

6:00 p.m. KEMPAC Reception, Seminar and Banquet, Grand Ballroom, Stouffer's Inn

Tuesday, September 19

All Day Class of '37, University of Louisville School of Medicine, Headquarters Room, Stouffer's Inn

12:00 noon KMA Board of Trustees, Luncheon Meeting, South Room A, Stouffer's Inn

5:00 p.m. Kentucky Society of Anesthesiologists, Social Hour, Stouffer's Inn

5:30 p.m. KMA—WA-KMA Reception, Tack Room, Stouffer's Inn

6:00 p.m. Kentucky Urological Association, Social Hour and Dinner, Ballroom A, Stouffer's Inn

6:30 p.m. Kentucky Chapter, American Academy of Pediatrics, Banquet, Galt House

6:30 p.m. Kentucky Chapter, American College of Radiology, Social Hour and Dinner, Galt House

6:30 p.m. Kentucky Chapter, American College of Chest Physicians, Social Hour and Dinner, Bienville North Room, Stouffer's Inn

6:30 p.m. Class of '37 Social Hour and Dinner, Galt House

Wednesday, September 20

11:50 a.m. President's Luncheon, Grand Ballroom, Stouffer's Inn

4:00 p.m. KMA Orientation Program, Sycamore Room, Stouffer's Inn

4:30 p.m. KMA Board of Trustees, Dinner and Meeting, South Rooms B and A, Stouffer's Inn

7:00 p.m. KMA House of Delegates, Meeting, Grand Ballroom, Stouffer's Inn

Thursday, September 21

7:30 a.m. Medical Advisory Committee of the Kentucky Society for Prevention of Blindness, Breakfast, Sycamore Room, Stouffer's Inn

12:00 noon Kentucky Chapter, American College of Surgeons, Luncheon Meeting, Bienville South Room, Stouffer's Inn

Dr. Robert McLeod Addresses State Coaches At Clinic

The Kentucky High School Coaches Association presented their annual basketball and football clinic on August 4 and 5 at the University of Kentucky. High school and college coaches throughout the State were encouraged to attend this clinic.

The program included lectures by all of the State universities' head coaches. Topics varied from "How Not To Lose" by Coach Adolph Rupp to a presentation on treating the athletic injuries.

Robert N. McLeod, Jr., M.D., Somerset, Chairman of the KMA Committee on School Health, Physical Education and Medical Aspects of Sports, participated on the Friday afternoon program and spoke on "Heat Illness in Early Season Football." He emphasized the seriousness of heat stroke and means of preventing it.

MEDICAL DIRECTOR

An attractive position as Medical Director at a new 13.5 million dollar mental retardation facility in the Cumberland Lake area. The facility is looking for a physician who would be interested in coordinating the medical program for 444 residents. Responsibilities include a 25-bed infirmary, a 35-bed non-ambulatory unit and supervision of a group of pediatricians who provide medical services. Those interested in this unique opportunity should contact *Art Trunkfield, Administrator, Oakwood, South Highway 27, Somerset, Kentucky 42501.*



A Georgetown physician of today and yesterday pose together as the portrait of Doctor William L. Sutton, M.D., the founder of KMA, is presented to the Kentucky Medical Association. Accepting the portrait is J. Campbell Cantrill, M.D., Trustee of the Ninth KMA District.

KMA Presented Portrait Of Its Founder

A reproduction of an 1852 portrait of KMA founder, William Loftus Sutton, M.D., was recently presented to the Association and will be displayed at the KMA Headquarters Office.

Doctor Sutton, a Georgetown surgeon, who made medical history on a number of occasions, was an active citizens as well. It was through his work in State politics that the Kentucky Medical Association was organized in 1851. In an effort to pass his Vital Statistics Law, Doctor Sutton had physicians throughout the State contact their representatives to urge the bill's passage. The bill was passed overwhelmingly in 1852, and Doctor Sutton was made the official state registrar.

The American Medical Association, of which he had been a member since 1846, named him chairman of the Committee on Epidemics and in 1858 chose him as their vice-president.

The KMA Memorials Commission, according to Eugene Conner, M.D., Louisville, Chairman, has been trying to secure this portrait for several years and is extremely pleased that KMA now has possession of it.

KMA Placement Service Available For Physician Use

One way the Physicians Placement Service assists Kentucky doctors is by publishing a report on those "Physicians Desiring Associates or Replacements." Specialty areas in which a physician is needed in a particular city are compiled by the Placement Service at the KMA Headquarters Office.

A quarterly report entitled "Physicians Seeking Locations" lists scholarship recipients, recent medical school graduates, physicians discharged from the military service, and doctors who have inquired about available locations in Kentucky. Physicians are urged to make use of this service when needed.

County	City	County	City
	PHYSICIANS DESIRING REPLACEMENTS		
	FAMILY PRACTITIONERS		
Butler	Morgantown	Pendleton	Falmouth
McLean	Calhoun	Muhlenberg	Central City
	PHYSICIANS DESIRING ASSOCIATES		
	FAMILY PRACTITIONERS		
Adair	Columbia	Madison	Richmond
Barren	Glasgow	McCreary	Whitley City
Boyd	Catlettsburg	Muhlenberg	Central City
Caldwell	Princeton	Muhlenberg	Greenville
Edmonson	Brownsville	Pike	Williamson
Hardin	Elizabethtown	Russell	Jamestown
Hopkins	Madisonville	Shelby	Shelbyville
Jackson	McKee	Warren	Bowling Green
Livingston	Salem	Washington	Springfield
	ANESTHESIOLOGY		
Barren	Glasgow	Muhlenberg	Greenville
Hopkins	Madisonville		
	DERMATOLOGY		
Warren	Bowling Green		

ENT (OTOLARYNGOLOGY)

Barren	Glasgow	Muhlenberg	Greenville
Hopkins	Madisonville	Warren	Bowling Green

INTERNAL MEDICINE

Barren	Glasgow	Madison	Richmond
Hardin	Elizabethtown	Muhlenberg	Greenville
Henderson	Henderson	Shelby	Shelbyville
Hopkins	Madisonville	Warren	Bowling Green

NEUROLOGY

Hopkins	Madisonville

NEUROSURGERY

Hopkins	Madisonville

OB-GYN

Hardin	Elizabethtown	Pike	Williamson
Marshall	Benton	Shelby	Shelbyville
Muhlenberg	Greenville		

OPHTHALMOLOGY

Warren	Bowling Green

ORTHOPAEDIC SURGERY

Hardin	Elizabethtown	Muhlenberg	Greenville
Henderson	Henderson	Pike	Williamson
Hopkins	Madisonville		

PATHOLOGY

Hopkins	Madisonville

PEDIATRICS

Henderson	Henderson	Shelby	Shelbyville
Muhlenberg	Greenville	Warren	Bowling Green

PSYCHIATRY

Henderson	Henderson	Hopkins	Madisonville

PULMONARY DISEASE

Laurel	London

RADIOLOGY

Warren	Bowling Green

SURGERY

Bell	Middlesboro	Pike	Williamson
Hardin	Elizabethtown	Warren	Bowling Green
Muhlenberg	Greenville		

UROLOGY

Henderson	Henderson	Muhlenberg	Greenville
Madison	Richmond	Warren	Bowling Green

September is Sight Saving Month. During the month-long campaign the Kentucky Society for the Prevention of Blindness stresses immediate need for increased public vigilance against "sight stealing" diseases, accident and neglect. The Society is the only organization dealing exclusively in PREVENTION. All contributions by Kentuckians are used to SAVE SIGHT for Kentuckians. Your dollars are ACTION dollars in the fight for sight.

In Memoriam

RUSSELL E. TEAGUE, M.D.
Frankfort
1905-1972

Russell E. Teague, M.D., former State Commissioner of Health, died on August 9, 1972, at the age of 67. Having retired in 1970 after 14 years as Commissioner, Doctor Teague's public health career spanned 40 years of service.



A 1929 graduate of the University of Louisville School of Medicine, Doctor Teague received his M.P.H. in 1933 from Johns Hopkins University. He was health officer for Wayne, Pike and McCracken counties before going to the State Department as director of Venereal Disease Control and later of Tuberculosis Control.

In 1951 he was appointed to serve as Secretary of Health of Pennsylvania but returned to Kentucky in 1956 to serve as Commissioner of Health. During his tenure of office, Doctor Teague was active in the establishment of the Medicaid and Comprehensive Health Planning programs in Kentucky. He prepared and promoted the statewide vaccination programs for polio and german measles and inaugurated statewide testing for PKU.

ALBERT E. LEGGETT, M.D.
Louisville
1888-1972

Albert E. Leggett, M.D., 85, died on July 17 at his home. An ophthalmologist, he had practiced in Louisville since 1931 following his graduation from the University of Pennsylvania School of Medicine. He belonged to the Southern Medical Association, the American College of Surgeons in Ophthalmology, as well as the Jefferson County Medical Society and the Kentucky and American medical associations.

BYRON N. PITTENGER, M.D.
Paris
1898-1972

Byron N. Pittenger, M.D., 74, died on July 25. A graduate of the Indiana University School of Medicine in 1925, Doctor Pittenger was an eye, ear, nose and throat specialist. An emeritus member of the Kentucky Medical Association, Doctor Pittenger was active in civic affairs and served as the chairman of the Municipal Housing Commission of Paris since 1949.

JOHN G. RULANDER, M.D.
Louisville
1918-1972

John G. Rulander, M.D., died on July 30 at the age of 54. A 1942 graduate of the University of Louisville School of Medicine, Doctor Rulander was very active in the medical field. He served as President of the Kentucky Academy of Family Physicians in 1969-70 and was a former President of the Jefferson County Academy of Family Physicians.

A member of KEMPAC and the Medic Alert Foundation, Doctor Rulander was President of the staffs at the Rehabilitation Center and St. Anthony's Hospital. He belonged to the Jefferson County Medical Society, Kentucky and American medical associations, as well as many civic organizations.

WILLIAM T. MAXSON, M.D.
Lexington
1908-1972

William Taylor Maxson, M.D., passed away on August 13, 1972, at the age of 63. A pediatrician, Doctor Maxson was a 1934 graduate of the University of Michigan Medical School. Retiring this past year from active practice, Doctor Maxson has been a member of the Fayette County Medical Society, as well as the Kentucky and American medical associations.

Blue Shield-Blue Cross

(Continued from Page 709)

Hospital Plan shall further have the right to submit hospital cases to the medical Review Board. Hospitalization in whole or in part not considered medically necessary by the Review Board shall be borne by the patient.'

It is important to note that determinations regarding the medical necessity clause, resulting in limitations of Blue Cross liability, are made only by the appropriate medical review committee or the Blue Cross Medical Director.

The Blue Shield indemnity certificates limit the amounts to be paid toward the physician's charge for a covered service and the UCR uses guidelines approved by KMA plus Peer Review to maintain conformance with the same criteria."

* * * * * *

The Kentucky Society for the Prevention of Blindness is the only voluntary health agency in Kentucky engaged exclusively in PREVENTION. Its comphrehensive program of community services includes free glaucoma clinics, preschool vision screenings, promotion of safety in school and industries, and distribution of films and informational materials to laymen and professionals. The annual campaign for funds to support these activities is conducted during September—Sight-Saving Month.

Prompt relief of pain is a lot of what the practice of medicine is all about... East or West.

In much of the Far East, the analgesic efficacy of Empirin® Compound with Codeine would probably be measured against acupuncture, an ancient and traditional therapeutic system.

In America, codeine sets such a high standard for oral analgesia, that it has become a criterion in terms of which other major oral analgesics are most often measured.

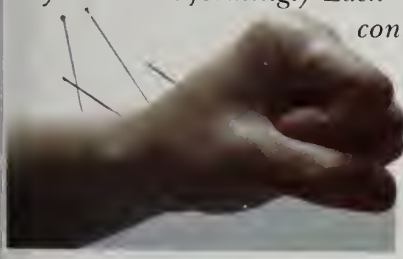
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Empirin Compound with Codeine is the most widely used, and probably the most pharmaceutically elegant analgesic preparation providing codeine. It's the time-tested combination for predictable pain relief . . . whether the pain is visceral or musculoskeletal; acute or chronic.



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Empirin Compound with Codeine No. 3 contains codeine phosphate (32.4 mg.) gr. ½. No. 4 contains codeine phosphate* (64.8 mg.) gr. 1. *(Warning—may be habit-forming.) Each tablet also contains: aspirin gr. 3½, phenacetin gr. 2½, caffeine gr. ½. Bottles of 100 and 1000.*



But for relief of Western pain

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Break the ulcer circuit to hyperacidity, hypermotility and ulcer pain.



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propantheline bromide
Relief Factor in Peptic Ulcer

orry, frustration, job pressure—all up excessive vagal currents in tients with peptic ulcer.

Pro-Banthine "insulates" the stomh, the duodenum and the lower testinal tract—the sites where ese destructive currents take their l.

This "insulation" helps block exssive enteric activity and acidity, us helping to provide the proper vironment for the healing of pep- ulcers.

It's nice to know that Pro-Banthine ovides this protection at a dosage at causes little or no discomfort d that, unlike ataractic agents, Pronthine does not cloud the patient's areness or thought processes.

By moderating excessive vagal currents Pro-Banthine relieves spasm, acid burn and pain. By reducing gastric motility Pro-Banthine also prolongs the activity of antacids.

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflex esophagitis or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

In theory a curare-like action may occur, with possible loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

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181R


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REHABILITATION MEDICINE, THIRD EDITION: by Howard A. Rusk, M.D.; published by the C. V. Mosby Company, St. Louis, 1971; 687 pages; price $21.00.

The revised third edition of *Rehabilitation Medicine* is an exceptional basic text in Physical Medicine and Rehabilitation and affords a good overview of this field. The book is divided into three sections: (1) evaluation, (2) general principles, and (3) specific rehabilitation management.

The evaluation section is short, but gives a good framework for and instruction in providing a thorough clinical physiatric examination.

The section on general principles is excellent. Sixteen short (six to eight page) chapters delve into many of the main areas of physiatry. Specific information on a topic is easily gleaned.

The third section contains a wealth of information on the management of various physical disabilities. However, specific subject material is sometimes difficult to locate since the chapters are longer and are not outlined in detail. In this regard, the index is fairly helpful.

In summary, an excellent resource text of Physical Medicine and Rehabilitation which stressed the role of the primary physician in the care of the physically impaired. It would be valuable and useful to the family practitioner as well as specialists who treat patients with neuro-muscular skeletal problems.

THOMAS A. KELLEY, JR., M.D.

MEDICAL INTERVIEWING: A PROGRAMMED MANUAL: by Robert E. Froelich, M.D. and F. Marian Bishop, Ph.D.; 1972; 131 pages; price $5.00.

This is a programmed manual divided into two sections.

The first one is in relation to the Medical Interview, dealing with the preparation of the interview, initiation and assisting. There is a section on obtaining specific information and structure in the interview and another section on specific interview problems.

The second section deals with different practice interviews and is very informative. There is a section on definition and terms used such as support, empathy, confrontation that are both interesting and informative. They tend to be slow reading. There are also sections on specific questions that the patient asks—"Do I have cancer," or "Is it my heart"?—that have very informative suggested answers that, I think, are usable for the experienced practitioner and of particular value for the medical student.

The information on techniques contained in the book is strong on emotional problems, although it also contains questions and answers that can be used in the non-psychiatric medical interview.

There is an interesting section on referrals to psychiatrists for care and the proper method for handling this type of referral. There is an interesting section on interruptions of interviews from other physicians and members of the physician's family which may not agree with the general feeling of many physicians in this community.

The section on adjuvant data is, I think, weak and incomplete for both the student and the practitioner.

Overall, a good book to read and have for reference.

WILLIAM VONDERHAAR, M.D.

BIOCHEMICAL PROFILING IN DIAGNOSTIC MEDICINE: by Joseph A. Preston, M.D. and David B. Troxel, M.D.; published by Technicon Instruments Corp., Tarrytown, N.Y., 1971; 51 pages; price $2.50.

This booklet is a collection of SMA 12 charts depicting abnormalities which should suggest to the clinician a "specific diagnosis or groups of differential diagnoses". The price is $2.50 for five copies obtainable from Technicon Corporation, the manufacturer of the instrument. One is left with the impression that the booklet is promotional and should be distributed gratis.

The physician should not be expected to commit to memory the SMA 12 patterns. Rather he must have sufficient knowledge to be able to fit biochemical findings to the overall diagnosis and differential diagnosis. There is no question that not infrequently in the various diseases classic patterns may be seen on the SMA 12. Unfortunately, many times the laboratory findings as well as the clinical findings do not fit a nice pattern. If one desires to see what the pattern ought to be, the booklet is worth the price. However, if a patient's pattern for any specific disease does not conform to what is expected, the physician should not be disappointed.

A statement is made in the introduction that one out of 20 results (5%) will be outside of the two standard deviation range. This is true if one were dealing with only one test. With the SMA 12, 12 separate results are reported, each stated normal range encompassing 95% of the population. The probability that at least one test will be outside the normal range is $1-0.95^{12}$. This calculation yields a figure of 46%—that is, a normal will be declared abnormal in at least one test 46 out of 100 times. The physician must play a critical role in determining whether the value given is acceptable or is to be rejected.

EDWARD J. FADELL, M.D.

Arthur los



A single-dose, non-staining anthelm

is pinworms...



with just one non-staining dose of Antiminth (pyrantel pamoate) Oral Suspension.

Highly effective. Active against pinworm...and roundworm.

Non-staining. Doesn't stain teeth or oral mucosa on ingestion. Doesn't stain stools, clothing or linen.

Simple dosage. Single-dose regimen: 1 cc. per 10 lbs. of body weight (1 tsp. per 50 lbs.)

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Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reaotions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia.

Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lbs. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml., supplied in 60 cc. bottles.

nt: **new ANTIMINTH®**

(pyrantel pamoate)

equivalent to 50 mg pyrantel/ml

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The Blue Grass Center is a treatment and rehabilitation facility for men and women who suffer from problems associated with a dependency on alcohol. Both the medical and psychosocial aspects of the illness are attended by a professional, multidisciplinary team of physicians, psychiatrists, psychologists, nurses, social workers, and technicians.

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Since sulfonylureas promote the release of sulin which is lipogenic and helps transport ucose into adipose tissue...

And since many overweight patients already ıve normal or high levels of endogenous insulin, ıy not consider DBI-TD?

It lowers blood sugar without stimulating insulin secretion from the pancreas. And this may be important to the dieting diabetic.

In adult-onset, nonketotic diabetics uncontrolled by diet alone...

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lowers blood sugar without raising blood insulin.

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ications: Stable adult diabetes llitus; sulfonylurea failures, nary and secondary; adjunct to ılin therapy of unstable diabetes litus.

ıtraindications: Diabetes mellitus t can be regulated by diet alone; enile diabetes mellitus that is omplicated and well regulated on ılin; acute complications of betes mellitus (metabolic acidosis, ıa, infection, gangrene); during mmediately after surgery where ılin is indispensable; severe atic disease; renal disease with mia; cardiovascular collapse ock); after disease states ɔciated with hypoxemia.

Warnings: Use during pregnancy is to be avoided.

Precautions: 1. *Starvation Ketosis:* This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**

2. *Lactic Acidosis:* This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. *Hypoglycemia:* Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake.
(B) 98-146-103-D (6/72)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of
CIBA-GEIGY Corporation
Ardsley, New York 10502

DBI 6666



a new outlook in chronic pain

of moderate to severe intensity

Though Talwin® Tablets, brand of pentazocine (as hydrochloride), can be compared to codeine in analgesic efficacy, Talwin is not subject to narcotic controls. Patients receiving Talwin Tablets for prolonged periods face fewer of the consequences you've come to expect with meperidine or codeine. And that, in the long run, can mean a better outlook for your chronic-pain patient.

Talwin Tablets are:

- **Comparable to codeine in analgesic efficacy:** one 50 mg. Talwin Tablet appears equivalent in analgesic effect to 60 mg. (1 gr.) of codeine. Onset of significant analgesia usually occurs within 15 to 30 minutes. Analgesia is usually maintained for 3 hours or longer.
- **Tolerance not a problem:** tolerance to the analgesic effect of Talwin Tablets has not been reported, and no significant changes in clinical laboratory parameters attributable to the drug have been reported.
- **Dependence rarely a problem:** during three years of wide clinical use, only a few cases of dependence have been reported. In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.
- **Not subject to narcotic controls:** convenient to prescribe—day or night—even by phone.
- **Generally well tolerated by most patients:** infrequently cause decrease in blood pressure or tachycardia; rarely cause respiratory depression or urinary retention; seldom cause diarrhea or constipation. If dizziness, lightheadedness, nausea or vomiting are encountered, these effects tend to be self-limiting and to decrease after the first few doses. (See last page of this advertisement for a complete discussion of adverse reactions and a brief discussion of other Prescribing Information.)

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic

a new outlook in chronic pain

of moderate to severe intensity



Contraindications: Talwin, brand of pentazocine (as hydrochloride), should not be administered to patients who are hypersensitive to it.

Warnings: *Head Injury and Increased Intracranial Pressure.* The respiratory depressant effects of Talwin and its potential for elevating cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a preexisting increase in intracranial pressure. Furthermore, Talwin can produce effects which may obscure the clinical course of patients with head injuries. In such patients, Talwin must be used with extreme caution and only if its use is deemed essential.

Usage in Pregnancy. Safe use of Talwin during pregnancy (other than labor) has not been established. Animal reproduction studies have not demonstrated teratogenic or embryotoxic effects. However, Talwin should be administered to pregnant patients (other than labor) only when, in the judgment of the physician, the potential benefits outweigh the possible hazards. Patients receiving Talwin during labor have experienced no adverse effects other than those that occur with commonly used analgesics. Talwin should be used with caution in women delivering premature infants.

Drug Dependence. There have been instances of psychological and physical dependence on parenteral Talwin in patients with a history of drug abuse and, rarely, in patients without such a history. Abrupt discontinuance following the extended use of parenteral Talwin has resulted in withdrawal symptoms. There have been a few reports of dependence and of withdrawal symptoms with orally administered Talwin. Patients with a history of drug dependence should be under close supervision while receiving Talwin orally.

In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.

Acute CNS Manifestations. Patients receiving therapeutic doses of Talwin have experienced, in rare instances, hallucinations (usually visual), disorientation, and confusion which have cleared spontaneously within a period of hours. The mechanism of this reaction is not known. Such patients should be very closely observed and vital signs checked. If the drug is reinstituted it should be done with caution since the acute CNS manifestations may recur.

Usage in Children. Because clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Precautions: *Certain Respiratory Conditions.* Although respiratory depression has rarely been reported after oral administration of Talwin, the drug should be administered with caution to patients with respiratory depression from any cause, severe bronchial asthma and other obstructive respiratory conditions, or cyanosis.

Impaired Renal or Hepatic Function. Decreased metabolism of the drug by the liver in extensive liver disease may predispose to accentuation of side effects. Although laboratory tests have not indicated that Talwin causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment.

Myocardial Infarction. As with all drugs, Talwin should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects of Talwin on the sphincter of Oddi, the drug should be used v caution in patients about to undergo surgery of the biliary tr

Patients Receiving Narcotics. Talwin is a mild narcotic antagor Some patients previously receiving narcotics have experienced i withdrawal symptoms after receiving Talwin.

CNS Effect. Caution should be used when Talwin is administe to patients prone to seizures; seizures have occurred in a few s patients in association with the use of Talwin although no cause effect relationship has been established.

Adverse Reactions: Reactions reported after oral administra of Talwin include *gastrointestinal:* nausea, vomiting; infreque constipation; and rarely abdominal distress, anorexia, diarr *CNS effects:* dizziness, lightheadedness, sedation, euphoria, h ache; infrequently weakness, disturbed dreams, insomnia, sync visual blurring and focusing difficulty, hallucinations (see *A CNS Manifestations* under WARNINGS); and rarely tremor, i tability, excitement, tinnitus. *Autonomic:* sweating; infreque flushing; and rarely chills. *Allergic:* infrequently rash; and ra urticaria, edema of the face. *Cardiovascular:* infrequently decr in blood pressure, tachycardia. *Other:* rarely respiratory depress urinary retention.

Dosage and Administration: *Adults.* The usual initial adult do 1 tablet (50 mg.) every three or four hours. This may be incre to 2 tablets (100 mg.) when needed. Total daily dosage should exceed 600 mg.

When antiinflammatory or antipyretic effects are desired in a tion to analgesia, aspirin can be administered concomitantly v Talwin.

Children Under 12 Years of Age. Since clinical experience in dren under 12 years of age is limited, administration of Talwi this age group is not recommended.

Duration of Therapy. Patients with chronic pain who have rece Talwin orally for prolonged periods have not experienced w drawal symptoms even when administration was abruptly dis tinued (see WARNINGS). No tolerance to the analgesic effect been observed. Laboratory tests of blood and urine and of liver kidney function have revealed no significant abnormalities a prolonged administration of Talwin.

Overdosage: *Manifestations.* Clinical experience with Talwin o dosage has been insufficient to define the signs of this condition.

Treatment. Oxygen, intravenous fluids, vasopressors, and o supportive measures should be employed as indicated. Assiste controlled ventilation should also be considered. Although n phine and levallorphan are *not* effective antidotes for respira depression due to overdosage or unusual sensitivity to Talwin, enteral naloxone (Narcan®, available through Endo Laboratorie a specific and effective antagonist. If naloxone is not available, enteral administration of the analeptic, methylphenidate (Ritali may be of value if respiratory depression occurs.

Talwin is not subject to narcotic controls.

How Supplied: Tablets, peach color, scored. Each tablet cont Talwin (brand of pentazocine) as hydrochloride equivalent to 50 base. Bottles of 100.

Winthrop Winthrop Laboratories, New York, N. Y. 10016 (15

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic



vacation in a vial: the spasm reactors in your practice deserve

"the Donnatal® Effect"

	each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol)	each Donnatal No. 2	each Extentab®
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital (warning: may be habit forming)	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.

Brief summary. Side effects: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction as in prostatic hypertrophy. Contraindicated in patients with acute glaucoma, advanced renal or hepatic disease or hypersensitivity to any of the ingredients.

A. H. ROBINS COMPANY, RICHMOND, VIRGINIA 23220

A·H·ROBINS

2 ways to provide a daily therapeutic supply of Vitamin C: 15 baked potatoes (skins and all!) or one capsule of Allbee® with C

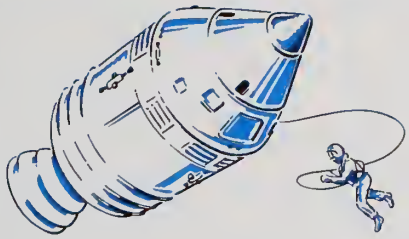
About 20 mg. Vitamin C in one baked potato (2½" diameter).

To many people the evening meal just isn't complete without potatoes. But your patient would have to eat 15 of them (skins and all!) to get as much Vitamin C as is contained in just one Allbee with C capsule taken daily. A bottle of 30 (month's therapeutic dose) supplies as much ascorbic acid as 450 potatoes, plus full therapeutic amounts of the B-complex vitamins. For the patient who is counting calories, Allbee with C is small potatoes because the B's and C are water soluble. Consider the number of calories in 15 potatoes, not to mention the mountain of butter and sour cream. Albee with C is available at pharmacies in the handy bottle of 30 and the economy size of 100 on your prescription or recommendation.

A. H. Robins Company, Richmond, Va. 23220

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Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

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Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



When you select this familiar antibiotic for IV infusion you have available a broad dosage rang that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections.

In life-threatening situations as much as 8 grams/day has been administere intravenously to adults.

In usual IV doses, Lincocin (lincomy hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in wat But when 4 grams or more per day is given, Lincocin should be diluted in less than 500 ml of either solution, and the rate of administration shoul not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respirator tract, skin and soft-tissue, and bone

infections caused by susceptible strains of pneumococci, streptococci, and staphylococci, including penicillin-resistant strains. Staphylococcal strains resistant to Lincocin (lincomycin hydrochloride, Upjohn) have been recovered. Before initiating therapy, culture and susceptibility studies should be performed. Lincocin has proved valuable in treating patients hypersensitive to penicillin or cephalosporins, since Lincocin does not share antigenicity with these compounds. However, hypersensitivity reactions have been reported, some of these in patients known to be sensitive to penicillin.

Well tolerated at infusion site: Lincocin intravenous infusions have not produced local irritation or phlebitis, when given as recommended. Lincocin is usually well tolerated in patients who are hypersensitive to other drugs. Nevertheless, Lincocin should be used cautiously in patients with asthma or significant allergies.

In patients with impaired renal function, the recommended dose of Lincocin should be reduced to 25—30% of the dose for patients with normal kidney function. Its safety in pregnant patients and in infants less than one month of age has not been established.

Lincocin may be used with other antimicrobial agents: Since Lincocin is stable over a wide pH range, it is suitable for incorporation in intravenous infusions; it also may be administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



1972 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatme
Skin and mucous membranes—Skin rash urticaria, vaginitis, and rare instances of foliative and vesiculobullous dermatitis h been reported. *Liver*—Although no direct lationship to liver dysfunction is establish jaundice and abnormal liver function t (particularly serum transaminase) have b observed in a few instances. *Cardiovasc* —Instances of hypotension following par teral administration have been report particularly after too rapid IV adminis tion. Rare instances of cardiopulmonary rest have been reported after too rapid administration. If 4.0 grams or more adn istered IV, dilute in 500 ml of fluid administer no faster than 100 ml per h *Special senses*—Tinnitus and vertigo h been reported occasionally. *Local reacti* —Excellent local tolerance demonstrate intramuscularly administered Linco (lincomycin hydrochloride). Reports of p following injection have been infrequ Intravenous administration of Lincocir 250 to 500 ml of 5% glucose in disti water or normal saline has produced local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *500* Capsules—bottles of 24 and 100. *Ste Solution, 300 mg per ml*—2 and 10 ml v and 2 ml syringe. *Syrup, 250 mg per 5* —60 ml and pint bottles.

For additional product information, con the package insert or see your Upj representative.

MED B-6-S (KZL-7) JA71-1

The Upjohn Company
Kalamazoo, Michigan 49001

Upjoh

Call it what you will, it may be premalignant...

Before

3/29/67 Before therapy with 5%-FU cream. Patient P. T. shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

After

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.



May 1957

The age of semi-synthetic penicillins begins at Beecham Research Laboratories.



The crucial experiment: conversion of 6-aminopenicillanic acid (6-APA) into benzylpenicillin by treatment with phenylacetyl chloride. We've come a long way since 1957. Over the past 14 years more than 3000 different semi-synthetic penicillins have been synthesized and evaluated by our staff. The fruits of their work are in your hands today.

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Totacillin® ampicillin trihydrate
Pyopen® disodium carbenicillin
Bactocill® sodium oxacillin
and more to come

Beecham-Massengill Pharmaceuticals BMP
Div. of Beecham Inc., Bristol, Tennessee 37620

☐Totacillin (ampicillin trihydrate) capsules equivalent to 250 mg. and 500 mg. ampicillin, for oral suspension equivalent to 125 mg./5 cc. and 250 mg./5 cc. ampicillin. ☐Pyopen (disodium carbenicillin) vials for injection equivalent to 1 gm. and 5 gm. of carbenicillin. ☐Bactocill (sodium oxacillin) capsules equivalent to 250 mg. and 500 mg. oxacillin and vials for injection equivalent to 500 mg. and 1 gm. oxacillin.

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Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

and Efudex® (fluorouracil) 5% cream can resolve it.

Call it actinic, solar or senile keratoses, many regard it as "precancerous."[1,2]

Topical fluorouracil, considered by some dermatologists to be a major advance in the treatment of multiple solar keratoses,[3,4] offers the physician a relatively inexpensive alternative to cryosurgery, electrodesiccation and cold knife surgery. Of the topical fluorouracils available, only Efudex offers 2% and 5% solution and 5% cream formulations—formulations that have proved effective in the treatment of these mutliple lesions.

Usual duration of therapy, 2 to 4 weeks.

Studies showed that with the 2% and 5% Efudex preparations, the usual duration of therapy was only 2 to 4 weeks.[5] Other studies with topical fluorouracil revealed that when concentrations of less than 2% were used, significant numbers of lesions recurred.[6]

Treats the lesions you can't see, too.

Numerous lesions, not apparent prior to 2% and 5% Efudex therapy, manifested themselves by definite reactions, while intervening skin remained relatively unaffected.[5] The early eradication of these subclinical lesions (which may otherwise have undergone further progression) probably accounts for the reduced incidence of future solar keratoses in patients treated with topical fluorouracil—especially with 5% concentrations.[6]

How to identify solar keratoses.

Typically, the lesion—a flat or slightly elevated brown to red-brown papule—is dry, rough, adherent and sharply defined. Multiple lesions are the rule.

Predictable therapeutic response.

The response to a typical course of Efudex therapy is usually characteristic and predictable. After 3 or 4 days of treatment, erythema begins to appear in the area of keratoses. This is followed by a moderate to intense inflammatory response, scaling and occasionally moderate tenderness or pain. The height of this response generally occurs two weeks after the start of therapy and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. Lesions that do not respond should be biopsied.

References: **1.** Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, Grune & Stratton, 1967, p. 842. **2.** Dillaha, C. J.; Jansen, G. T, and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Pharmaceutical Therapeutics in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 92. **3.** Belisario, J. C.: *Cutis, 6*:293, 1970. **4.** Sams, W. M.: *Arch. Derm., 97*:14, 1968. **5.** Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey. **6.** Williams, A. C., and Klein, E.: *Cancer, 25*:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

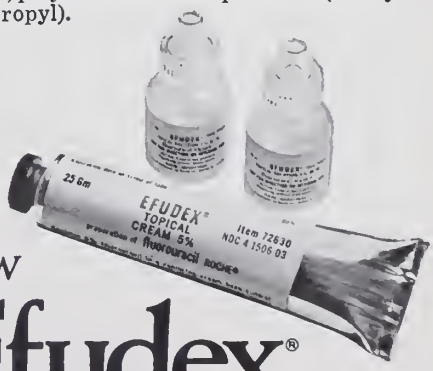
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



now
Efudex®
(fluorouracil)
cream/solution

Will his return to work mean the return of undue psychic tension?



When it's mandatory to keep the post-coronary patient calm, consider Valium (diazepam).

Although he's promised to take it easy back on the job, you know he's going back to the same stressful circumstances that may have contributed to his hospitalization. If he experiences excessive anxiety and tension because of overreaction to stress, your prescription for Valium can bring relief. During the period of readjustment Valium can quiet undue anxiety.

For moderate states of psychic tension, 5-mg or 2-mg Valium tablets *b.i.d.* to *q.i.d.* can usually provide reliable relief. For severe tension/anxiety states, the 10-mg tablets often produce desired results.

The most commonly reported side effects are drowsiness, ataxia and fatigue. Until individual response is determined, caution patient against driving or operating dangerous machinery.

Valium® (diazepam)

For the tense cardiac patient who must be kept calm

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults*: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients*: 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children*: 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

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VOLUME 70 OCTOBER 1972 NUMBER 10

The Journal of The KENTUCKY Medical Association



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Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling
and the psychotropic action of Valium® (diazepam).

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

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(diazepam)

To help you manage excessive psychic tension

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MESSAGE FROM THE PRESIDENT



IN my first venture as a "writer" I cannot refrain from alluding just briefly to the remarks I made during the recent Kentucky Medical Association Annual Meeting.

Many of us have a tendency, on occasion, to be "skeptical" of what has often been referred to as "organized medicine." I would, however, in this first President's Page of my year as President of KMA say to you that if we are to succeed and meet the challenges that lie ahead we must have a strong organization. As we enter the 1972-73 Associational year, it is my sincere hope that organization will include **you.** Your thoughts, ideas, energies, talents and possibly some of your valuable time can make the difference in our Association's ability to effectively meet the challenges that surely face us in this profession.

I am hopeful that this year will see us renew our effort in continuing medical education, will see an enlargement of the activities of the Kentucky Foundation for Medical Care, will see us launch new and meaningful programs for this Association and its membership. However, it is my sincere hope this year will mark the beginning of the time when every physician in Kentucky becomes a viable and active member of **your** Association.

If that happens we can surely meet the challenges and can continue to build on our record of service to the physician, the profession and, most importantly, to the public of the Commonwealth.

Lee C. Hasson, M.D.

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 19-year-old gravida 2, para 1, was admitted to the hospital at 7:20 a.m. on June 28, 1970 complaining of backache. She had no prenatal care and her EDC was August 18, 1970.

On admission her blood pressure was 210/130 and urine 4+ for albumin. She was sedated with 100 mg of Demerol and was given 2 cc of Mercuhydrin. Her blood pressure remained elevated and at 11:30 a.m. she had her first convulsion, for which she was treated with 15 mg of Morphine plus 2.5 mg of Serpasil i.m. Her convulsions did not cease but became almost continuous.

She was seen in consultation by an Ob-Gyn consultant who thought the uterus to be 24 weeks in size with normal heart tones. The cervix was thick and closed and the uterus was very tense and tender. His impression was eclampsia plus abruptio placenta and he suggested an immediate Cesarean section.

Under general anesthesia the Cesarean section was begun at 1:17 p.m. A stillborn male infant was delivered and "the placenta was manually extracted and the endometrial cavity was scraped clean with a sharp curette." There was no mention of findings of an abruptio placenta. No blood was given during the operative procedure. While in the operating room, her pupils became widely dilated and voluntary respiration ceased. This continued for about one hour. A spinal puncture was performed which revealed grossly bloody spinal fluid. She continued to have respiratory depression and was pronounced dead at 3:30 p.m., on June 28, 1970.

There was no autopsy. The final diagnosis was uterine pregnancy at 28 weeks, eclampsia probably producing brain stem hemorrhage.

The Committee classified this death as a direct obstetric death with preventable factors on the part of the patient for not obtaining prenatal care. The medical management could have been improved in addition since adequate therapy for the eclampsia was never given. This type of patient should have an IV started, preferably with Lactated Ringer's solution so that hydration and urinary output are maintained. Magnesium sulfate is the drug of choice for treatment as severe pre-eclampsia and eclampsia. It can be given either as an intravenous drip or intramuscularly. Demerol and Morphine in the doses mentioned really are not adequate. Serpasil will provide lessening of blood pressure but can be dangerous for the infant in that it causes wash out of catachol amines which are one of the primary defense mechanisms of a small premature.

Certainly the patient's eclampsia was never controlled prior to induction of anesthesia. In the report given to the Committee, no findings were indicated which suggested that urgent a need for emergency Cesarean section. It would have been far better to have controlled her eclampsia and allowed a period of stabilization, preferably longer than 12 hours, prior to induction of anesthesia. The infant has a better chance if the mother's health is improved and certainly the maternal mortality may very well have been prevented.

Anesthesia for this type of patient is terribly difficult since her convulsions must be controlled, but without giving too deep an anesthetic. One would therefore, again, like the convulsions to have stopped prior to induction of anesthesia.

It is remotely possible that this patient had a cortical venous thrombosis which will duplicate exactly the history given and will cause grossly bloody spinal fluid. However, without an autopsy it is almost impossible to make this diagnosis and certainly the treatment would likely have been the same.

In summary, prenatal care is mandatory for all patients and might have prevented this fatality. Adequate treatment of the eclampsia includes an IV, adequate urinary output and Magnesium sulfate as the primary therapy.

DELEGATES' DELIBERATIONS



Doctor Giannini

IN an effort to encourage young physicians to become members of the American Medical Association, the AMA House of Delegates at their Annual Meeting in June established a new membership category for medical students effective January 1, 1973. Changes in the bylaws will need to be adopted at the Clinical Convention in December.

At the New Orleans Clinical Convention held in December, 1971, revisions in the AMA bylaws were made to enable Interns and Residents to become members of the American Medical Association at an annual dues rate of $20.00.

Intern and Resident membership offers both a series of benefits and a voice in AMA policy development. Benefits include eligibility to participate in AMA's group disability program, retirement program and other insurance programs now in development. It also entitles these members to receive the weekly publication of the *Journal of the American Medical Association,* a choice of one of ten specialty journals, *Today's Health* and the *American Medical News.*

The Kentucky Medical Association has also adopted a special classification of Interns and Residents known as "In-Training" members and has also established a "Student" membership category. In-Training member dues are $10.00 per year which gives them the right to vote and receive all publications of the Association. Any student in an accredited medical school in Kentucky or any resident of Kentucky who is a student of any accredited medical school in the United States is eligible to become a student member of the Association at a cost of $1.00 per year. Students may apply directly to the State Association for membership and be assigned to the county society of their choice.

At the Annual Meeting held in June, the House approved in principle the expansion of the Council on Medical Education, the Council on Medical Services and the Council on Long-Range Planning and Development to include one Intern or Resident member of the AMA on each Council. This action has been referred to the Council on Constitution and Bylaws for study and will be acted upon at the December Clinical meeting.

J. THOMAS GIANNINI, M.D.
KMA DELEGATE TO AMA

A Link in the Chain

auxiliary

Mrs. George W. Schafer, Louisville, was installed as President of the Woman's Auxiliary to the Kentucky Medical Association at the Golden Anniversary Convention of the Auxiliary, September 18-20. Mrs. Schafer will be writing the "A Link in The Chain" section of The Journal for the Associational year, 1972-73.



THIS is our 50th year as an organized Auxiliary. Yet, we do not look backward, only forward—to projects which would activate us as physicians' wives and involve us as leaders in our communities.

The year of the Presidential election, the Olympics, Women's Lib, jumbo jets, and possibly the end of the draft. With so much going on about us how can we fail to have an exciting Auxiliary year.

We must meet the challenge that confronts all physicians' wives—by being more knowledgeable about legislation concerning Medicine, VD, Drug Abuse, Nutrition, Ecology and Health Manpower. The list is endless. And we must use this knowledge in our everyday life while grocery shopping, attending church or playing bridge.

Kentucky earned an award both regionally and nationally for the greatest membership percentage increase in June of '72. This year of 1972-73 we wish to again increase our membership. If your wife is not a member of the Auxiliary, we miss her, and I hope she misses us.

We are grateful to the KMA for it's unselfish interest in our projects and for its kind consideration of us in its planning. To the many physicians and their wives that attended the District Trustee Meetings, you have been the highlights of my year as President-Elect of the WA-KMA.

One of the primary reasons for our existence is to meet other physicians' wives and become better acquainted. We all have a common bond—that of being a physician's wife. We want to aid you in any endeavor that would benefit you—and we thank you for allowing us to be——physicians' wives.

MRS. GEORGE SCHAFER, PRESIDENT
WOMAN'S AUXILIARY TO KMA



OPEN LETTER FROM BLUE SHIELD

Dear Doctor:

Kentucky Blue Cross and Blue Shield are pleased to announce the enrollment of all full-time permanent Commonwealth of Kentucky employees and eligible dependents, effective October 1, 1972.

Over 25,000 state workers throughout Kentucky will have coverage for these services:

Hospital—Seventy-day Blue Cross Comprehensive will full semi-private room. **Surgical-Medical Care**—Schedule D Blue Shield with indemnity payments for surgical or obstetrical care, up to a $450.000 maximum. For inpatient, non-surgical care, Blue Shield will pay $5.00 per day for doctor's visits beginning on the first day of admission up to 70 days during the member's contract year (October 1 through September 30).

Outpatient Diagnostic Laboratory and X-ray Services—Up to $50.00 per member during a contract year when performed in a doctor's office or outpatient department of a hospital, according to a schedule of indemnities.

This group also has Major Medical coverage with $100 deductible and 80-20 co-payment with a $10,000 maximum per "benefit period" and a $30,000 life-time maximum per member.

Subscribers will be issued regular Kentucky Blue Cross and Blue Shield Identification Cards with Social Security Numbers used as Certificate Numbers. These benefits plus other details of the coverage can be determined through cross-referencing the coverage codes in your Blue Shield Physicians' Manual.

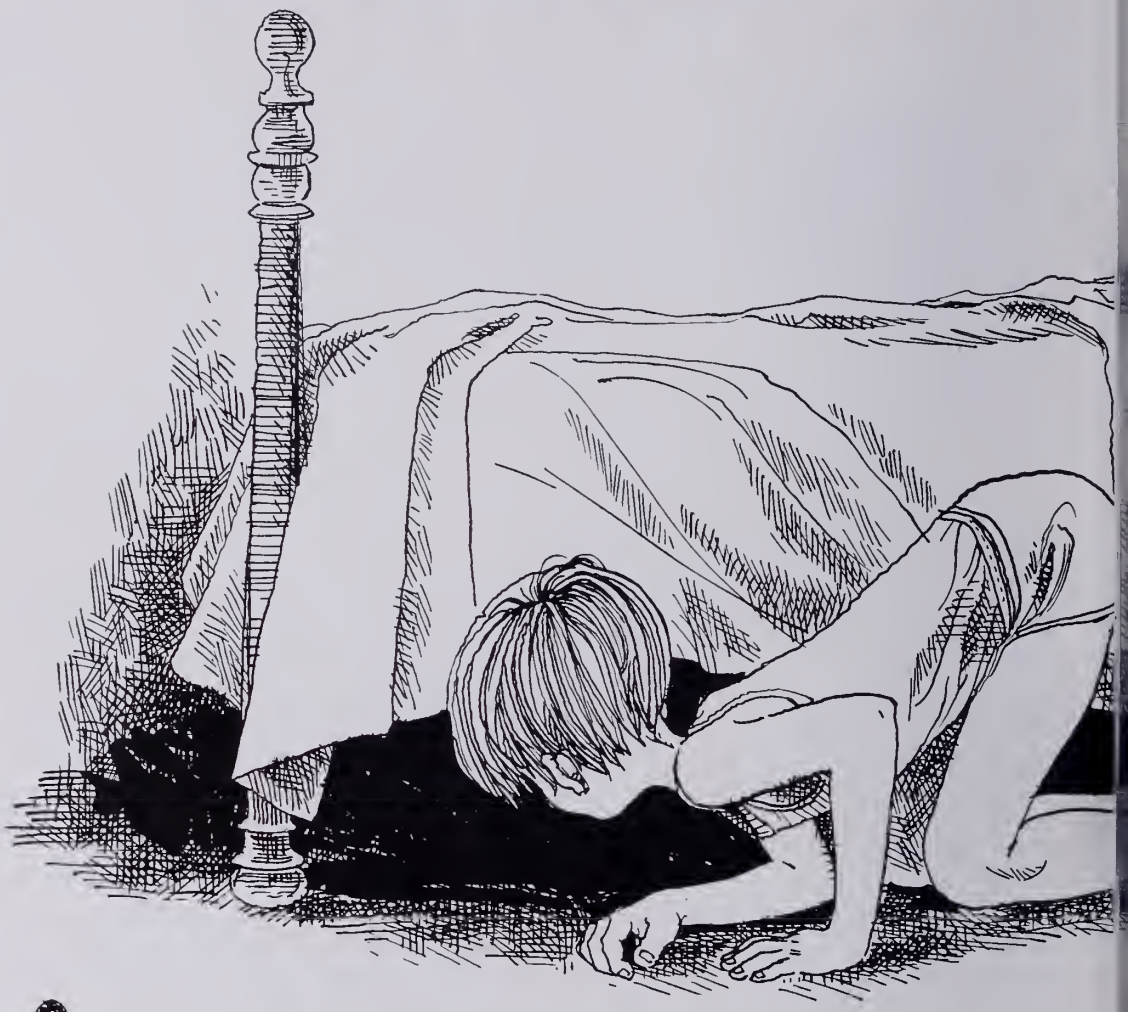
Should you have any questions regarding filing claims for this group, please contact Professional Relations Division of Blue Shied, 3101 Bardstown Road, Louisville, Kentucky 40205, Phone (Area Code 502) 897-1531.

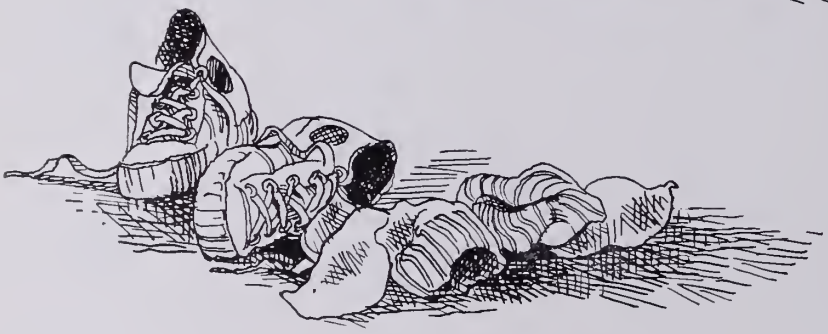
Sincerely,

J. Ed McConnell

J. Ed McConnell
President

Arthur los





A single-dose, non-staining anthelm

is pinworms...



with just one non-staining dose of Antiminth (pyrantel pamoate) Oral Suspension.

Highly effective. Active against pinworm...and roundworm.

Non-staining. Doesn't stain teeth or oral mucosa on ingestion. Doesn't stain stools, clothing or linen.

Simple dosage. Single-dose regimen: 1 cc. per 10 lbs. of body weight (1 tsp. per 50 lbs.)

Well-tolerated. Based on pre-introductory studies.

Pleasant-tasting. Easy-to-take, caramel-flavored oral suspension.

Economical. One prescription for the entire family.

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia

Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lbs. of body weight. (One teaspoonful — 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

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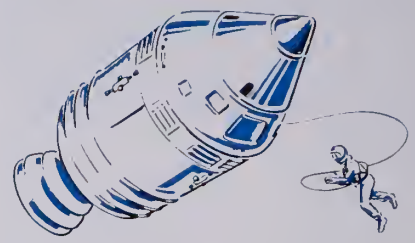
(pyrantel pamoate)

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Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

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NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, *300 mg.;* SODIUM ACID PHOSPHATE, *500 mg.*

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

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Manufacturers of Ethical Pharmaceuticals



rheumatoid arthritic blowup...

Tandearil® Geigy

oxyphenbutazone NF tablets of 100 mg.

ɔrtant Note: This drug is not a simple analgesic. ot administer casually. Carefully evaluate patients re starting treatment and keep them under close rvision. Obtain a detailed history, and complete ical and laboratory examination (complete ogram, urinalysis, etc.) before prescribing and at ient intervals thereafter. Carefully select patients, ding those responsive to routine measures, con- dicated patients or those who cannot be observed ently. Warn patients not to exceed recommended ge. Short-term relief of severe symptoms with mallest possible dosage is the goal of therapy. ige should be taken with meals or a full glass of Patients should discontinue the drug and report ediately any sign of: fever, sore throat, oral ns (symptoms of blood dyscrasia); dyspepsia, astric pain, symptoms of anemia, black or tarry s or other evidence of intestinal ulceration or rrhage, skin reactions, significant weight gain or a. A one-week trial period is adequate. Discon- in the absence of a favorable response. Restrict ment periods to one week in patients over sixty. *ations:* Acute gouty arthritis, rheumatoid arthritis, matoid spondylitis.

raindications: Children 14 years or less; senile nts; history or symptoms of G.I. inflammation or etion including severe, recurrent or persistent epsia; history or presence of drug allergy; blood rasias; renal, hepatic or cardiac dysfunction; rtension; thyroid disease; systemic edema; atitis and salivary gland enlargement due to the polymyalgia rheumatica and temporal arteritis; nts receiving other potent chemotherapeutic ts, or long-term anticoagulant therapy.

lings: Age, weight, dosage, duration of therapy, ence of concomitant diseases, and concurrent t chemotherapy affect incidence of toxic reac- . Carefully instruct and observe the individual nt, especially the aging (forty years and over) have increased susceptibility to the toxicity of the Use lowest effective dosage. Weigh initially dictable benefits against potential risk of severe, fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemie.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute end reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticeria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, eggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

(B) 98-146-800-E

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmeceuticals
Division of CIBA-GEIGY Corporetion
Ardsley, New York 10502

TA. 8356-9



a new outlook in chronic pain

of moderate to severe intensity

Though Talwin® Tablets, brand of pentazocine (as hydrochloride), can be compared to codeine in analgesic efficacy, Talwin is not subject to narcotic controls. Patients receiving Talwin Tablets for prolonged periods face fewer of the consequences you've come to expect with meperidine or codeine. And that, in the long run, can mean a better outlook for your chronic-pain patient.

Talwin Tablets are:

- **Comparable to codeine in analgesic efficacy:** one 50 mg. Talwin Tablet appears equivalent in analgesic effect to 60 mg. (1 gr.) of codeine. Onset of significant analgesia usually occurs within 15 to 30 minutes. Analgesia is usually maintained for 3 hours or longer.
- **Tolerance not a problem:** tolerance to the analgesic effect of Talwin Tablets has not been reported, and no significant changes in clinical laboratory parameters attributable to the drug have been reported.
- **Dependence rarely a problem:** during three years of wide clinical use, only a few cases of dependence have been reported. In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.
- **Not subject to narcotic controls:** convenient to prescribe – day or night – even by phone.
- **Generally well tolerated by most patients:** infrequently cause decrease in blood pressure or tachycardia; rarely cause respiratory depression or urinary retention; seldom cause diarrhea or constipation. If dizziness, lightheadedness, nausea or vomiting are encountered, these effects tend to be self-limiting and to decrease after the first few doses. (See last page of this advertisement for a complete discussion of adverse reactions and a brief discussion of other Prescribing Information.)

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic

a new outlook in chronic pain

of moderate to severe intensity



Contraindications: Talwin, brand of pentazocine (as hydrochloride), should not be administered to patients who are hypersensitive to it.

Warnings: *Head Injury and Increased Intracranial Pressure.* The respiratory depressant effects of Talwin and its potential for elevating cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a preexisting increase in intracranial pressure. Furthermore, Talwin can produce effects which may obscure the clinical course of patients with head injuries. In such patients, Talwin must be used with extreme caution and only if its use is deemed essential.

Usage in Pregnancy. Safe use of Talwin during pregnancy (other than labor) has not been established. Animal reproduction studies have not demonstrated teratogenic or embryotoxic effects. However, Talwin should be administered to pregnant patients (other than labor) only when, in the judgment of the physician, the potential benefits outweigh the possible hazards. Patients receiving Talwin during labor have experienced no adverse effects other than those that occur with commonly used analgesics. Talwin should be used with caution in women delivering premature infants.

Drug Dependence. There have been instances of psychological and physical dependence on parenteral Talwin in patients with a history of drug abuse and, rarely, in patients without such a history. Abrupt discontinuance following the extended use of parenteral Talwin has resulted in withdrawal symptoms. There have been a few reports of dependence and of withdrawal symptoms with orally administered Talwin. Patients with a history of drug dependence should be under close supervision while receiving Talwin orally.

In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.

Acute CNS Manifestations. Patients receiving therapeutic doses of Talwin have experienced, in rare instances, hallucinations (usually visual), disorientation, and confusion which have cleared spontaneously within a period of hours. The mechanism of this reaction is not known. Such patients should be very closely observed and vital signs checked. If the drug is reinstituted it should be done with caution since the acute CNS manifestations may recur.

Usage in Children. Because clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Precautions: *Certain Respiratory Conditions.* Although respiratory depression has rarely been reported after oral administration of Talwin, the drug should be administered with caution to patients with respiratory depression from any cause, severe bronchial asthma and other obstructive respiratory conditions, or cyanosis.

Impaired Renal or Hepatic Function. Decreased metabolism of the drug by the liver in extensive liver disease may predispose to accentuation of side effects. Although laboratory tests have not indicated that Talwin causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment.

Myocardial Infarction. As with all drugs, Talwin should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects of Talwin on the sphincter of Oddi, the drug should be used w caution in patients about to undergo surgery of the biliary tr

Patients Receiving Narcotics. Talwin is a mild narcotic antagon Some patients previously receiving narcotics have experienced n withdrawal symptoms after receiving Talwin.

CNS Effect. Caution should be used when Talwin is administe to patients prone to seizures; seizures have occurred in a few s patients in association with the use of Talwin although no cause effect relationship has been established.

Adverse Reactions: Reactions reported after oral administrat of Talwin include *gastrointestinal:* nausea, vomiting; infrequer constipation; and rarely abdominal distress, anorexia, diarrl *CNS effects:* dizziness, lightheadedness, sedation, euphoria, he ache; infrequently weakness, disturbed dreams, insomnia, sync visual blurring and focusing difficulty, hallucinations (see *A CNS Manifestations* under WARNINGS); and rarely tremor, i tability, excitement, tinnitus. *Autonomic:* sweating; infrequer flushing; and rarely chills. *Allergic:* infrequently rash; and ra urticaria, edema of the face. *Cardiovascular:* infrequently decre in blood pressure, tachycardia. *Other:* rarely respiratory depressi urinary retention.

Dosage and Administration: *Adults.* The usual initial adult dos 1 tablet (50 mg.) every three or four hours. This may be increa to 2 tablets (100 mg.) when needed. Total daily dosage should exceed 600 mg.

When antiinflammatory or antipyretic effects are desired in a tion to analgesia, aspirin can be administered concomitantly w Talwin.

Children Under 12 Years of Age. Since clinical experience in c dren under 12 years of age is limited, administration of Talwi this age group is not recommended.

Duration of Therapy. Patients with chronic pain who have recei Talwin orally for prolonged periods have not experienced w drawal symptoms even when administration was abruptly disc tinued (see WARNINGS). No tolerance to the analgesic effect been observed. Laboratory tests of blood and urine and of liver kidney function have revealed no significant abnormalities a prolonged administration of Talwin.

Overdosage: *Manifestations.* Clinical experience with Talwin o dosage has been insufficient to define the signs of this condition.

Treatment. Oxygen, intravenous fluids, vasopressors, and ot supportive measures should be employed as indicated. Assiste controlled ventilation should also be considered. Although na phine and levallorphan are *not* effective antidotes for respira depression due to overdosage or unusual sensitivity to Talwin, parenteral naloxone (Narcan®, available through Endo Laboratories a specific and effective antagonist. If naloxone is not available, parenteral administration of the analeptic, methylphenidate (Ritali may be of value if respiratory depression occurs.

Talwin is not subject to narcotic controls.

How Supplied: Tablets, peach color, scored. Each tablet cont Talwin (brand of pentazocine) as hydrochloride equivalent to 50 base. Bottles of 100.

Winthrop Winthrop Laboratories, New York, N. Y. 10016 (15

50 mg. Tablets

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brand of

pentazocine (as hydrochloride)

the long-range analgesic

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Glasgow	Holiday Inn	11/1/72
Harlan	Harlan ARH Cafeteria	10/4/72
Hopkinsville	Holiday Inn	11/8/72
Lexington	Imperial House	10/10/72
Louisville	Holiday Inn — Midtown	10/17/72
Louisville	Medical Arts Building	10/18/72
Morehead	Holiday Inn	9/26/72
Owensboro	Gabes	10/25/72
Paducah	Ramada Inn	11/9/72
Pikeville	Pikeville Country Club	9/28/72
Somerset	Holiday Inn	10/5/72

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*Koch-Weser, J., *et al*: *Arch. Intern. Med.*, *128* 399, 1971.

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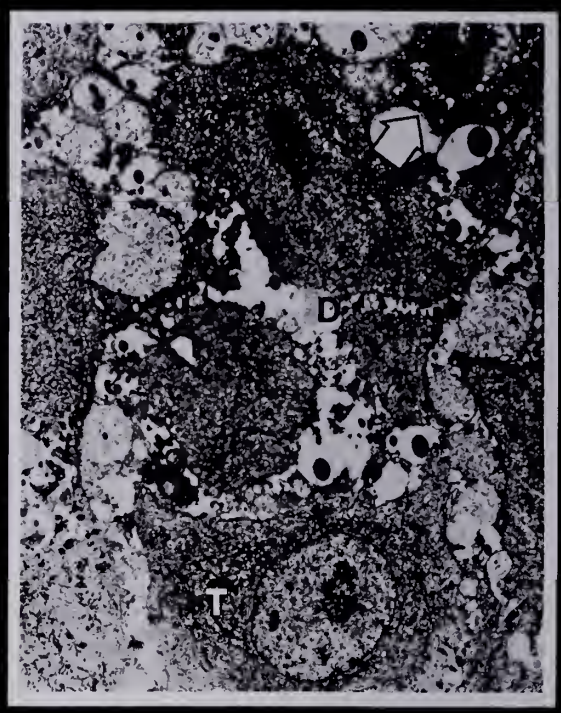
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An Unusual Case of Jaundice Due to The Common Bile Duct Entering A Duodenal Diverticulum

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Hopkinsville, Kentucky

There follows a case report and review of the literature pertaining to the problems of duodenal diverticulosis. Frequently noted on routine gastrointestinal examinations, duodenal diverticula are usually of incidental interest, but may be symptomatic. The preoperative diagnosis can only be suspected if the physician is aware of the anatomical variants and complications of duodenal diverticula.

DIVERTICULA of the duodenum are frequently seen in the clinical practice of medicine. The frequency which they are seen has increased markedly since the advent of the upper gastrointestinal series. Basically, diverticula of the duodenum are no different than those of any other part of the gastrointestinal tract. However, because of the location at which they form, inflammation or pressure on surrounding structures can produce a myriad of symptoms. The following case is one in which the duodenal diverticulum was occluded and caused the patient to present with the differential diagnostic problem of obstructive jaundice. The case will be discussed, and following the discussion of the case, a review of the literature will be cited. Also, a review of the anatomic consideration of diverticula of the duodenum will be summarized as well as the complications.

Case History

L. H., a 59-year-old, white female, was first seen on October 28, 1969. She gave a history of having epigastric distress, and two years prior to this examination had had a cholecystectomy for cholelithiasis. She developed a postoperative hernia in the subcostal incision which had been repaired. She had continued to have multiple bouts of flatulence and burning. A small reducible hiatus hernia was demonstrated on gastrointestinal series. At that time, she had no evidence of duodenal ulcer by x-ray.

The patient weighed 152-1/2 lbs. Her BP was 140/90. Her physical examination was generally unremarkable. The patient had a barium enema and IV cholangiogram both of which were considered to be within normal limits. The gastrointestinal series demonstrated a duodenal diverticulum. She was felt to be symptomatic from her hiatus hernia, and was placed on a hiatus hernia regimen and returned to her local physician. On November 17, 1969, she was seen in the emergency room with abdominal cramping, generalized abdominal pain, jaundice and vomiting. She was hospitalized and examination revealed only mild generalized abdominal tenderness. Her labora-

tory work was as follows: Serum bilirubin initially was 2 total with direct 1.6. Alkaline phosphatase 7.1 Bodansky units and SGOT 142 units. Total serum protein 6.8 with a normal electrophorectic pattern. Her Hemoglobin was 13.7 gms. The electrolytes were within normal limits. Four days after admission her bilirubin had risen to 5.2 total with direct of 3.7. Alkaline phosphatase was 9.2 Bodansky units. The SGOT had fallen to 66 units, the white count had risen to 15,850 and she was febrile to 101. Her differential showed 83% segs and 10% bands. It was thought that the patient had biliary obstruction with ascending cholangitis. Surgery was performed and she was found to have a large diverticulum arising from the second portion of the duodenum. The diverticulum was tensely distended. The orifice of the ampulla of Vater emptied into the diverticulum. The diverticulum was positioned in such a way as to functionally occlude the ampulla of Vater causing biliary obstruction. The mucosa of the diverticulum was bile stained. A small plug of heterotopic pancreatic tissue was present between the ampulla and the os of the diverticulum. The surgical correction included a hiatal hernia repair, exploration of the common duct, excision of the duodenal diverticulum after duodenotomy was performed, intraduodenal choledochoduodenostomy, and finally, a gastrostomy was done for decompression.

Her postoperative course was prolonged. She had nasogastric suction for approximately nine days and had profuse bile drainage from the drain site. Nine days after her operation, a

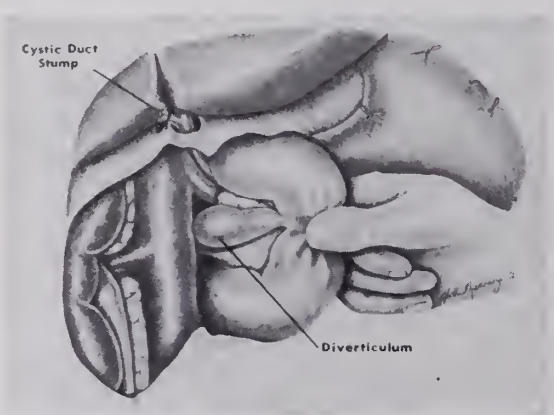


FIG. 1. Duodenum retracted medially showing the posterior placement of the diverticulum.

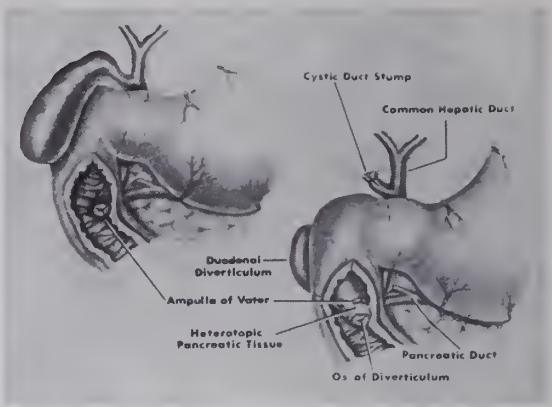


FIG. 2. Relationships of the diverticulum to the Ampulla of Vater.

T-tube cholangiogram showed no leak of radiopaque material and the biliary drainage had markedly decreased. On the 11th postoperative day the drainage had stopped and within the next three days the T-tube was removed. Following discharge, her course was entirely unremarkable. An IV cholangiogram was made on March 3, 1971, and failed to visualize the common duct, but an air contrast study was obtained which showed a normal size common duct.

Historical Background

Chomel[9], in 1710, is credited with being the first to describe a duodenal diverticulum. In his case, the diverticulum contained 22 biliary calculi. Morgagni[22], Sommering[32], Rahn[30] and Fleischmann[12] all describe cases found at postmortem examinations. Harley[15] in 1930 was the first to report on the subject in the English literature. Perry and Shaw[29] presented, in the Guy's Hospital Reports of 1893, the first critical analysis of a number of cases based on autopsy record.

Up to 1908 there were fewer than 75 reported cases of diverticulosis of the duodenum. Bauer[3] in 1912, reported the first case operated on for a symptomatic diverticulum. The cases of Rosenthal[31] and Bauer[3] were the first two recorded instances of death due to complications of duodenal diverticula. Rosenthal's case died of pancreatitis and Bauer's case died of obstruction of the bowel.

Case[6] was the first to publish a case of diverticulosis of the duodenum diagnosed in a living patient by means of x-ray studies with

the opaque meal. His case was published in 1913 and this was followed rapidly in 1915 by Forssell and Key[13] who made the preoperative diagnosis by means of x-ray studies and then successfully removed a symptomatic diverticulum. Lockwood[20] collected a series of x-ray studies from 1913 until 1932 and was able to cite a total of 357 cases diagnosed roentgenographically.

The first report of a common bile duct entering duodenal diverticulum was made by Baldwin[2] in 1911, who reviewed the literature and found no previous cases of this anatomical variant. The second case was reported in 1931 by Benninghoven and Michael[4]. Their second case was based on a postmortem finding. Collett[10] was the first to demonstrate a common bile duct entering a duodenal diverticulum radiographically by T-tube cholangiography. Sir William Osler in 1881 was the first to describe a primary diverticula of the duodenum in the American literature[8].

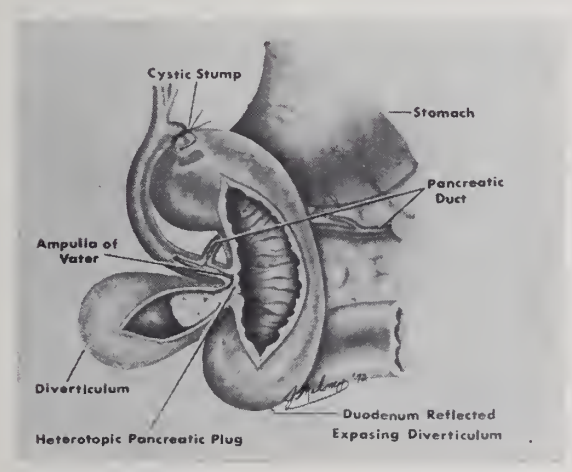


FIG. 3. Relationship of diverticulum and heterotopic tissue in relationship to Ampulla of Vater as seen from dorsal surface.

Anatomic Considerations

Classification is based on the supposed origin of the diverticula. The categories considered are:

(1) True congenital diverticula: These are present from birth and are identical with the structure of the duodenum from which they arise. This type is rare.

(2) Primary diverticula (acquired): Primary diverticula are acquired hernia protru-

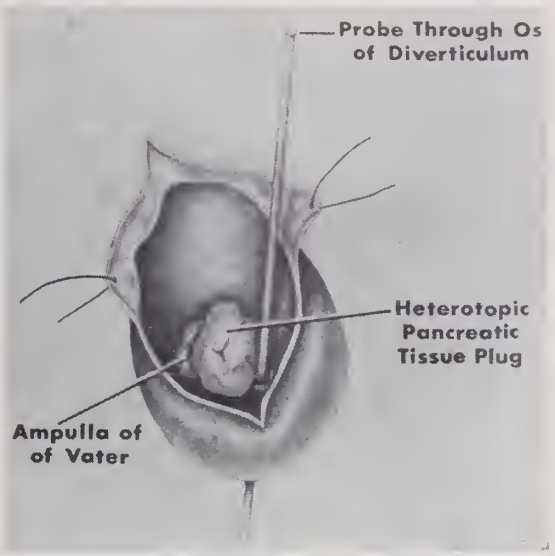


FIG. 4. Relationship of heterotopic pancreatic tissue to the Os of the diverticulum as viewed from the fundus of the diverticulum.

sions of certain layers of the duodenum such as the mucosa, muscularis mucosae and submucosa, through a localized weakness in the bowel wall. The weakened area may be due to congenital or anatomic causes and the true muscular code of the diverticula is either absent or grossly deficient. Primary diverticula are the most common type.

(3) Secondary diverticula (pseudodiverticula): This type is invariably found in the first portion of the duodenum and are most commonly due to traction upon that portion from some other cause such as ulcer, cholecystitis or other inflammatory causes. This is the second most common type.

Both the true congenital and the primary acquired types are found on a developmental basis according to Nagel[24]. They occur at potentially weak spots in the bowel wall. Fischer[11] concluded that the mucosal hernia oc-

Table I

Anatomic Location of Diverticula[17]

	No.	% age
Portion of duodenum		
1st	3	6.1
2nd	32	65.2
3rd	15	30.0
4th	4	8.0
Position on duodenum		
Medial	43	87.7
Lateral	2	4.0
Anterior	11	22.4
Posterior	4	8.0

(Size varied between 1 by 0.5 cm to 7.5 by 8 cm)

curs along the paths of perivenous connective tissue sheaths. Ackerman[1] substantiated the theory of congenital weakness by demonstration that in all 50 of his specimens, diverticula arose from the concave or mesenteric surface between the second and fourth portions of the duodenum, and thus corresponded to the areas of embryonic weakness in the bowel wall. Bremer[7] noted that those diverticula arising laterally are true diverticula where as those arising medially are duplications of the bowel.

Perry and Shaw[29] suggested another possible mechanism for hernial protrusion through the congenital weak areas in the duodenum. They felt that the infraduodenal pressure, due to the pylorus preventing reflux, was greater than that in the remaining small bowel.

Further evidence for the congenital theory has been advanced by Keibel and Mall[18] who first called attention to the extraordinary activity of the duodenal diverticulum after it has reproduced the hepatic and pancreatic outgrowths. "It proliferates so quickly that the lumen of the bowel is occupied by series of 'vacuoles,' some of which produced bulges in the surrounding mesenchyme, thus producing definite diverticula."[18] Since the first portion of the bowel does not proliferate and vacuolize, this would explain why true congenital diverticula are not found in this region. Also, in the adult, plicae circulares are found in a distance of one to two inches from the pylorus and at first, are very small and scattered.

Secondary diverticula are due primarily to the peptic ulceration or to traction from without.

Duodenal diverticulum may by either single or multiple. The single solitary type is most common according to Bockus, comprising about 90-92% of all diverticulum[17]. The anatomic location of the diverticula is noted in Table I.

It is seen that the majority of diverticula are in the medical aspect of the second portion of the duodenum.

"The usual primary type of diverticula are fragile and when dissected out, collapse in a thin wall. They consist of mucous and submucous coats of the intestine with perhaps a few muscle fibers which gradually fade away as the flask shaped fundus is reached. Their openings in the bowel may vary from one millimeter to a size large enough to admit the finger. With the deficiency of muscle fibers, stasis would seem to be enhanced. Actually diverticula of the duodenum resemble pulsion type diverticula found elsewhere in the gastrointestinal tract."[17]

A review of the literature shows that the reported incidence of diverticula ranged from 0.16 to 5.19% on x-ray examinations and up to 22% on autopsy studies[9]. No sex predilection has been noted. The consensus of opinion seems to be that the most likely etiology of diverticula is congenital weakness due to vessel entrance or exit. Other causes which seem to play a part at times are aberrant gastric or pancreatic mucosa which cause weakness of the wall. Generally to be noted, is that the average incidence of duodenal diverticula found at autopsy is about four times the average incidence of those determined at x-ray examination (8.6% and 1.73 respectively).

Duodenal diverticula are reported in infants,

Table II

Diverticula Found At Autopsy[17]

Author	Year	No. of Autopsies	Duodenal Diverticula No.	% age incidence
Schuppel	1880	45	7	15.5
Rosenthal	1908	100	3	3.0
Baldwin	1911	105	14	13.3
Linsmayer	1914	1367	45	3.3
Nagel	1925	900	26	2.9
Odgers	1930	80	2	2.5
Horton and Mueller	1933	216	11	5.09
Grant	1933	133	15	11.3
Ackerman	1943	50	11	22.0

(Range of incidence — 2.2% to 22.0%. Average 8.6%)

Table III

Diverticula Found By X-Ray Examination[17]

Author	Year	No. X-ray Exams	Duodenal Diverticula No.	Duodenal Diverticula % age Incidence
Case	1920	6,847	85	1.2
Andrews	1921	2,200	26	1.18
Spriggs and Marxer	1926	1,000	38	3.8
Cryderman	1927	770	40	5.19
Larimore	1927	3,446	19	0.6
Lemmel	1934	3,324	50	1.5
Ranken and Martin	1934	72,715	111	0.016
Beals	1937	1,887	45	2.2
Edwards	1939	9,631	82	0.85
Mahorner and Kisner	1947		4	0.5
Feldman	1948			2.0

(Range incidence—0.016% to 5.19%. Average—1.73%)

but are fairly rare in patients under the age of 40. The incidence rapidly increases in patients over the age of 50. This in part may reflect the infrequent gastrointestinal x-ray examinations performed on young patients. Generally speaking, next to the colon, the duodenum is the most common site for enteric diverticula.

Complications

Roughly 95% of duodenal diverticula are felt to be asymptomatic. When symptoms are present, they are often due to complications of diverticula. MacLean[21] emphasized the pathologic changes which occur in duodenal diverticula do not differ from those which occur in the mucosa in any other part of the alimentary tract. The complications generally fall into two categories: 1) Those with comparatively vague general symptoms and, 2) Those with definite signs and symptoms which clearly indicate the diverticulum as the cause of a serious abdominal castastrophe.

Despite the infrequency in which symptoms of duodenal diverticulum occur, complications do arise. Complications with definite signs and symptoms are noted in Table V.

The difficulty in diagnosis occurs because of the frequency of occurrence of associated lesions. (see Table VI).

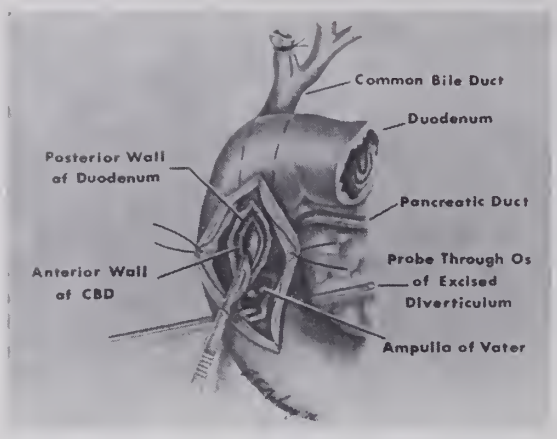
Simply stated, the complications are divided into two basic categories, those related to pressure on contiguous structures and those duc to inflammation. Jaundice, cholangitis, acute and chronic pancreatitis, and duodenal obstruction can result from compression of the diverticulum whereas diverticulitis, ulceration with or without hemorrhage, perforation, abscess formation and internal fistula can occur as inflammatory sequelae. This only excludes the category of malignancy which is extremely rare. Whitcomb[25] in a study of 1,064 patients with duodenal diverticula, noted only one had a serious complication necessitating surgery. This will help put the complications in proper perspective to the incidence of disease.

Many authors have reported an increased incidence of gallstones in diverticula. Kamil Imanoglu[16] and others created partial obstructive lesions of the common bile duct with fibrosing agents and studied the incidence of cholelithiasis in rabbits, dogs and monkeys. Seven of eight rabbits developed gallstones within a 14-16 week period. Two of eight dogs developed stones within a 4 to 20 week period, and one of two monkeys developed stones within 19 to 22 weeks. The question raised is, do their findings have a counterpart in man? If so, then in those patients with diverticula which cause some decreased lumenal size of the common bile duct, one may expect an increased incidence of gallstones.

Table IV

Complications With Vague, General Symptoms[17]

Symptom	Author
Symptoms simulating gallbladder disease	Bockus, Melville, and Hare and Cattell
Symptoms simulating peptic ulcer disease	Bockus, Edwards, Tanner and Benians, and Beals
Flatulent dyspepsia	Brown and Dokard and Cattell and Mudge
Symptoms simulating colitis	Schoen



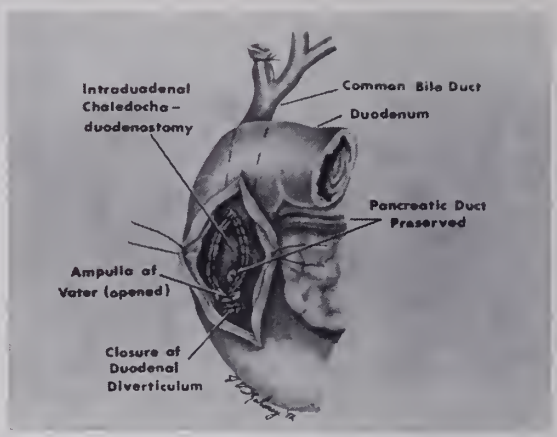


FIG. 5 and 6. Reimplantation of the common bile duct by Intraduodenal Choledocheduodenostomy.

Demonstration of Diverticula

The gastrointestinal series with the opaque meal is now the easiest way of demonstrating the diverticula of the duodenum. However, Ackerman[1] notes that in addition to the routine views, supine and prone positons with rotation to the right and left, and sometimes even a semi-Trendelenburg position may be used, as some diverticula fill better in this way. Also, contrast material can be instilled into the duodenum by means of a nasogastric tube.

If one wishes to attribute pressure symptoms to a diverticulum, then the patient can be watched during the x-ray examination. If symptoms appear when the diverticulum is full and subside when the diverticulum empties, this information can add clinical weight to the supposition that the diverticulum is causing symptoms. At operation it may be difficult to see the diverticulum. Wilburn[32] notes that air inflation of the duodenum by a 22 gauge needle, may help demonstrate the duodenal diverticulum.

Treatment

Medical: Generally, the treatment of duodenal diverticula, like the treatment of diverticula elsewhere, is basically the treatment of complications. Since the diagnosis is often difficult to make with certainty, as will be seen below, the surgical treatment can be associated with a high incidence of morbidity and mortality. Medical therapy, except in the acute abdominal catastrophies, should be attempted initially. Diverticulitis would be treated the same as diverticulitis elsewhere in the gastrointestinal tract. This treatment will not be reiterated here. If associated lesions are found in conjunction with the duodenal diverticulum, then the medical treatment of the associated lesion should also be done initially. For instance, if a duodenal ulcer is found with the diverticulum, then vigorous ulcer management would be the first order of the day. In those patients exhibiting cholelithiasis or cholecystitis,

Table V

Complications With Definite Signs and Symptoms[17]

Symptom	Author
Obstruction of common bile duct	Ackerman, Friedlaender, Ogilvie and Behrend
Jaundice	Edwards, Morton, Nicholson Delannoy and Tacquet, Behrend, Hare and Cattell, Wilbur, Wilkie, and Deucher
Cholangitis	Morton, Wheeler and Ogilvie
Acute or chronic pancreatitis	Bockus, Edwards, Frentzel-Beyme, Gregoire, Morton, and Ogilvie
Partial duodenal obstruction	Ackerman, Bockus, Morton, Edwards, and Bauer
Diverticulitis and peridiverticulitis	Ackerman, Bockus, Browne and McHardy, Edwards, Friedlaender, Morton, and Wheeler
Perforation	Boland, Lockwood, and Lucinian
Ulceration in diverticulum	Bockus, Lahey, and Marshall, and Weber
Malignancy	Mendillo and Koufman and Morris and Feldman
Massive hemorrhage	Bockus, Finney, Godard, Gregoire and Herrington
Fistula into common bile duct	Delannoy and Tacquet
Blind Loop syndrome	Landon

then medical management could initially be attempted. However, if a patient has duodenal diverticulum and is being operated on for either asymptomatic cholelithiasis or acute cholecystitis and cholelithiasis, consideration should be given as to the necessity of surgically correcting the diverticulum since some authors feel that "post-cholecystectomy syndrome" can be produced by this lesion.

Surgical: Handelsman[14] noted that prior to their series, which was a 23-year collection of patients seen up to 1959 at Johns Hopkins Hospital, there had been only two previously reported series. Cattell and Mudge[8], in 1952, reported the Lahey Clinic experience of 25 patients, and Waugh and Johnston reported on 30 patients seen at Mayo Clinic. In these previous series, the mortality rate had been 78%. In Handelsman's series of 90 patients, only 16 had surgery, and of these, three had major complications. He felt that concurrent pancreatitis or recent pancreatitis may be contraindications to excision, and that in this eventuality, by-pass of the affected area may be the procedure of choice. He also felt that simultaneous barium demonstration of the duodenum with IV cholangiography might be helpful in demonstrating anatomical relationships prior to surgery.

"In the absence of other disease, 67% of patients who had resection or by-pass for duodenal diverticulum, uncomplicated by the presence of other disease, experienced good results."[14] These figures compare closely with the figure of 50% stated from the Mayo Clinic and 53% from the Lahey Clinic.

In the series by Cattell[8], two cases of aberrant gastric mucosa and one case of aberrant pancreatic rests were noted. Attributing symptomatology to a diverticulum is basically a task of excluding gallbladder disease, gastric disease, duodenal disease and small and large bowel disease. Cattell felt that if disagreement existed after these examinations, then trials should be given on ulcer management, antispasmotics, low fat diets, etc. If there was failure or incomplete relief on conservative managements, then surgery should be contemplated. They had two deaths out of 25 operative patients and both of these were due to pancreatic enzyme leaks.

Table VI

Associated Lesions[17]

	No.	% age
Diverticulosis of the colon	15	30.0
Gallbladder disease	11	22.4
Peptic ulcer (stomach or duodenum)	10	20.4
Esophageal hiatus hernia	8	16.3
Multiple duodenal diverticula	4	8.0
Esophageal diverticula	2	4.0
Gastric diverticula	1	2.0

Note: 34 or 69.3% of the total number of patients, had associated pathologic findings with a combination of the above lesions.

Summary

A case report of jaundice due to the common bile duct entering an obstructed duodenal diverticulum was presented. Review of the literature by Collett, Tirman and Caylor[10] in 1950 uncovered five cases of this occurrence in the literature prior to 1949. In all of these, the anomaly was found at autopsy. Their case constituted the first case demonstrated roentgenographically. In 1952 Blegen[5] reported a second case. The case presented here is believed to be the second reported case with surgical correction.

A review of the literature pertaining to incidence and complications of duodenal diverticulum is presented. While duodenal diverticula are common, the complications produced by this anatomical disorder are rare. However, when they occur, signs and symptoms of many other abdominal disorders may be simulated. In order to treat the patient with abdominal symptoms and the presence of duodenal diverticula, the physician must be aware that the abdominal symptoms may be produced wholly or in part by the duodenal diverticulum.

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Suicidal Patients Among Admissions to Louisville General Hospital (1961-1970): Incidence and Diagnostic Conclusion†

Richard M. Dicter*
Louisville, Kentucky

A study of 2,543 patients admitted during the last ten years suggests most suicidal attempts are symptoms of a temporary imbalance in the patient's psychodynamic equilibrium rather than due to more serious and chronic psychiatric disorders.

THE purpose of this study was to investigate the incidence of self-destructive behavior among patients hospitalized on the Psychiatry Service at Louisville General Hospital during the past decade, 1961-1970. The investigator sought to answer three basic questions:

a) Is the incidence of suicidal attempts on the increase when compared with the total number of admissions to the Psychiatry Wards at Louisville General Hospital?

b) Is there a correlation between suicidal behavior and specific types of psychopathology as defined by diagnostic formulation?

c) Are there any significant differences among the population of self-destructive patients as to sex and age group, and how is each sex and age group distributed among the diagnostic classifications?

Abstract

Clinical experience gathered by the psychiatry staff dealing with the in-patient service suggested the possibility that admissions resulting from self-destructive behavior have continued to increase. The investigator studied records covering ten years of admissions to the psychiatry wards, selecting each January and June of the consecutive years in order to obtain the data of interest. A total of 2,543 records reviewed revealed the following:

The incidence of suicidal attempts among admissions to the Psychiatry Service has increased consistently and significantly from approximately 19% of total admissions during the first three years of the decade to 35% during the last three years. This means that the incidence has nearly doubled in the past decade. The study underscored data from other centers published in the literature. Sixty-five per cent of the suicidal population was female while 34% was male (a ratio of 1.9 to 1), despite the fact that the sample population was well balanced: 1,231 (48%) male and 1,312 (52%) female.

Double the number of male suicide attempts were alcohol-related, while more than double the number of female attempts were drug overdoses—a national trend. The findings also revealed that twice as many males and females have turned to drugs as a suicidal means in 1970 as in 1961, while alcohol-related suicidal attempts remained relatively stable over the decade. In regard to psychopathology leading to self-destructive behavior, transient stress disorders prevailed rather than psychotic disorders or psychoneurotic depressive disorders.

Introduction

Since 1900, the national rate of suicide has remained at approximately 11 per 100,000 population. During 1966, nearly 25,000 Americans killed themselves, and this estimate is very likely conservative because of the stigma associated with being labeled a suicide. Even with the conservative estimate, the rate of suicidal deaths ". . . exceeds the death rate of tuberculosis, leukemia, rheumatic fever, ulcers and homicides . . . and approaches that by motor vehicle accidents."[1]

The Department of Psychiatry at Louisville General Hospital wished to determine whether suicide rates have risen sharply over the last decade. The patient population on the Psychiatry Service during the last decade afforded

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an excellent opportunity for statistical investigation for several reasons. A suicidal attempt constitutes a misdemeanor by Kentucky Revised Statute Chapter 202. The great majority of patients admitted as "suicidal attempts" are brought to the emergency room by police. The suicidal attempts who sought first aid in our patient population ran the gamut of all socioeconomic levels and backgrounds. Although other emergency rooms in the area attend to self-destructive patients, the majority are either brought or transferred to Louisville General Hospital because of the excellent first aid facilities. All patients with drug overdoses who are in need of anesthesiology attention are treated in the recovery room and all gunshot or stab wounds are attended by surgery until they are well enough to be transferred to the Psychiatry Service.

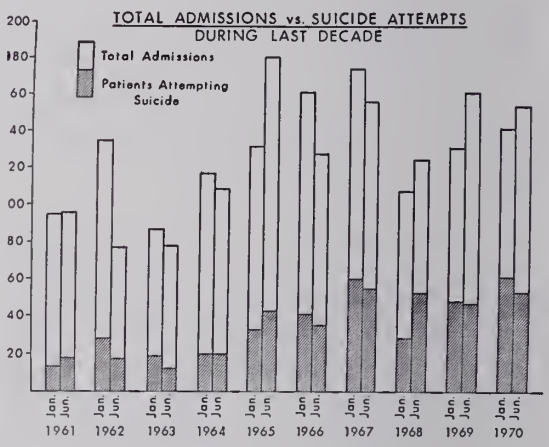
Methods

The psychiatric records of patients admitted to the Psychiatry Service during January and June of each year during the past decade (1961-1970) were studied. This included 2,-543 patients, 704 (27.7%) of whom were "suicidal attempts." The term "suicidal attempt" referred to those patients who actually behaved in a self-destructive manner. The study did not include patients who merely made verbal references to suicide, nor did it attempt to distinguish "gestures" from *bona fide* attempts. This information may have been omitted from many charts, and many patients who took clinically innocuous drugs may have been intent on succeeding in their attempts. Consequently such a distinction would have introduced a subjective parameter into the study; hence it was not employed.

The data was gathered on forms which classified patients according to diagnosis, age, sex, alcohol-related or drug-intoxicated admissions. The final diagnosis on all patients was rendered by the psychiatry staff and diagnostic classifications were in accordance with the *Standard Nomenclature of Diseases and Operations, American Medical Association.* Diagnostic classifications pertinent to the study were psychotic disorder, psychoneurotic disorder, transient stress disorder, personality disorder and chronic brain syndrome. Those patients who were diagnosed primarily as mentally deficient, or patients discharged as "boarders" or "observation" were placed under the classification "other."

Nearly all raw figures in the data were calculated in terms of per cent to eliminate distortion from the population increase in the area during the decade. It was verified that admissions policy toward suicidal attempts had changed in no way during the decade, including those patients brought in as misdemeanors by the police. The age division for classification separated patients 25+ from those up to and including age 25 in order to compare the findings with data using a similar age division reported by others[2].

Table I



Discussion

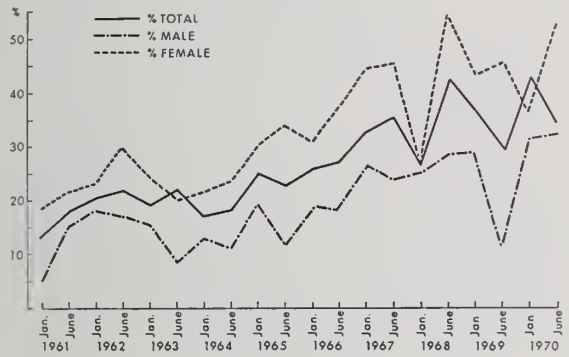
The data gathered in this study demonstrated that the suicidal behavior among admissions to the Psychiatry Service increased markedly over the past decade. The per cent of suicidal patients admitted increased from an average of 18.7% during 1961, 1962, 1963 to an average of 35.1% during 1968, 1969, and 1970 (Table I). Of the total admissions 9.8% more males and 13.8% more females were suicidal admissions in 1970 than in 1961. When considered separately, both sexes showed significant increases: 21% more males and 23.9% more females made suicidal attempts in 1970 than in 1961 (Table II).

In their recent work on suicidology, Farberow, Schneidman, and Litman noted that "the modal suicide attempt is most likely to be female, to attempt suicide by barbiturates, and

to give as a 'reason' marital difficulties or depression."[3] Studies by Maris and Dublin reflect this observation and also establish that the rate of suicidal attempts increases steadily with age[4]. The stereotyped suicidal attempt that emerges from this study of General Hospital patients over the past decade confirms the pattern above, with the exception that tricyclic antidepressants and benzodiazepine anti-anxiety agents are increasingly being employed as overdose agents along with barbiturates. This probably reflects the increasing spectrum of psychotropic drugs available as well as the increasing numbers of prescriptions written for these drugs by physicians in every branch of medicine.

Table II

PERCENT ADMISSIONS MAKING SUICIDAL ATTEMPTS, BY MONTH

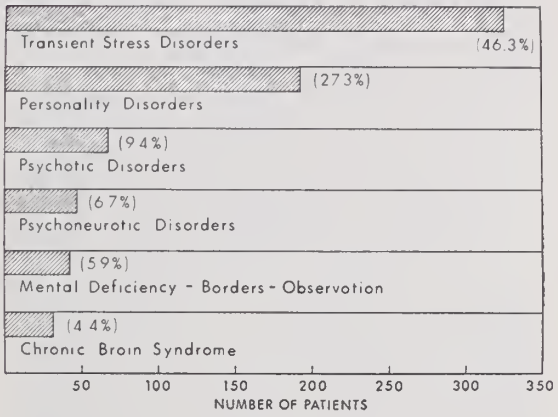


The average suicidal patient in this study was female (65.2% females and 34.8% males), and attempts increased with age (65.4% of the total attempts were 25+ years of age). These figures, as well as the patient population, are remarkably close to those in a study by Farberow and Schneidman of 2,652 attempts in Los Angeles County during 1957. Their suicidal attempts included 69% females and 31% males, and 64% of those attempts were over age 30[5].

The percentage of the patients attempting suicide during the last decade that were released with the diagnosis of transient stress disorder was 46.2% while only 9.4% were diagnosed psychotic and 6.7% diagnosed psychoneurotic (Table III). Interviews with suicidal patients admitted during the summer of this study confirmed that marital maladjustments or problems concerning interpersonal relationships in general were at least part of

Table III

NUMBER OF SUICIDAL PATIENTS IN EACH DIAGNOSTIC CLASSIFICATION



every patient's emotional distress. Patients reacting to transient stress displayed feelings of rejection, reduced ego-strength and lowered self-esteem. However, the vast majority were "sorry" they had attempted to harm themselves, and many admitted to taking pills as a means to secure attention. The risk that these patients would again attempt suicide after three or four days of reflection appeared minimal.

While alcohol-related suicidal attempts decreased slightly, the number of drug related attempts climbed at a steady rate. Alcohol-related attempts decreased from 7.5% of total admissions during the first three years of the decade to 5.6% during the last three years. Alcohol-related suicidal attempts in males were approximately *double* those in females. They represented 4.4% of the total admissions in males and 2.1% in females.

Drug-intoxicated suicidal attempts in acute brain syndrome showed a reversal of the sex ratio seen in alcohol-related attempts. Of total attempts, 14.9% were female and 6.2% were male for a ratio of 2.4 to 1. The study revealed a very significant trend: drug-related attempts admitted during the past decade increased in far greater increment in females than in males by approximately a factor of 5 (an 11.5% increase in females versus a 2.7% increase in males). This suggests, at least, an increased awareness of drugs and their use by the unstable or distressed in our society. It is to be noted that fortunately, many suicidal patients choose relatively innocuous drugs or ingest levels that do not affect them seriously.

The results of this study emphasize the need for a growing concern at the rapid rise of self-destructive incidences among those aiding in treatment of the emotionally ill patient. How can this information be helpful for those interested in suicide prevention?

The fact that most studies have placed suicidal attempts in the context of a transient stress disorder (a reaction to an overwhelming impulse without underlying personality disturbance) offers a clear-cut message: The majority of attempts might be viewed as symptoms of a temporary imbalance in a personality's dynamic equilibrium. Investigations that focus on the individual's coping mechanisms in the face of stress and empathetic counselors who encourage potential suicidal attempts to "talk things out" first may be part of a successful approach in combatting the ever increasing number of attempts.

Conclusions

In this study, results are presented from the charts of 2,543 patients admitted to the Psychiatry Service during the months of January and June during the past decade.

1) The rate of suicidal attempts has nearly doubled among admissions from 18.7% during the first three years of the decade to 35.1% during the last three.

2) The ratio of females to males who attempted suicide during the decade was approximately 2:1 (65.2% to 34.8%).

3. Of 704 suicidal attempts, females 25+ ranked first in admissions, followed in order by males 25+, females through age 25, and males through age 25.

4) Transient stress disorders accounted for 46.2% of the diagnoses, followed by personality disorder, psychotic disorder, psychoneurotic disorder, "other" and chronic brain syndrome.

5) Alcohol-related attempts were approximately double in males compared with those in females, while the reverse was true of drug-intoxicated attempts. While alcohol-related attempts have decreased over the decade, drug-related attempts are rising rapidly and significantly.

6) The above conclusions confirm studies done throughout the country and published in suicidal literature and suggest most suicidal attempts are symptoms of a temporary imbalance in the patient's psychodynamic equilibrium rather than the more serious and chronic psychiatric disorders.

Acknowledgements

I wish to thank the Department of Physiology, University of Louisville School of Medicine, for the use of their computer which enabled me to do several hundred calculations for this study in a minimum of time. I also wish to thank Nina Kateryniuk, M.D., Associate Professor of Psychiatry and Clinical Director at General Hospital, for her advice and encouragement in this study.

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Chondrodystrophia Calcificans Congenita†

Nuhad D. Dinno, M.D.* and Bernard Weisskopf, M.D.**

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Documentation of a Kentucky family with two siblings and implication of a third with Conradi's Syndrome, in support of the assertion that this is an autosomal recessive inherited disease rather than sporadic.

Conradi's Syndrome, also known as epiphyseal disease, chondrodystrophia calcificans congenita, punctate epiphyseal dysplasia, and variations thereof, is a disease whose major diagnostic features are stippled epiphyses, contractures, shortening of the proximal long bones, rhizomelia, cataracts, optic atrophy, saddle nose, skin abnormalities and mental retardation. Other associated abnormalities may be found in the cardiovascular, renal and central nervous systems.

Although at least 125 cases of Conradi's Syndrome have been reported[1, 2, 13], only six families have been reported with more than one affected member, and none has been parental. Many authorities consider this disease to be inherited as autosomal recessive[1-7] but due to this low incidence of familial reports[8-12] the assertion has been difficult to support. This paper presents a seventh such family in which the syndrome has been documented in two children and suspected to have been present in a third.

Case I

Upon referral this 8-1/2-month-old white female presented with multiple congenital bone anomalies, failure to thrive and bilateral cataracts. She was the product of an uneventful full term pregnancy to a gravida VIII, para V, 28-year-old mother. Delivery was spontaneous and uncomplicated in cephalic presentation. Birth weight was 7 lbs and condition was noted to be good. She was kept in an incubator for two days, and discharged on the fourth.

Laboratory findings included chromosome studies which revealed a normal female karyotype (46 XX). Blood studies included a PBI of 6.0 mcg%, serum calcium 10.4 mg%, phosphorus 5.3 mg%, alkaline phosphatose 8.7 B units and cholesterol 145 mg%. Urine studies by paper and thin film methods indicated an increase in the general pattern of amino acids, but each remaining within normal limits. Tests for sugars and reducing substances were negative. The FeC13 test was also negative.

Psychological evaluation with the Maxfield-Fjeld Social Maturity Scale for the blind indicated a social age attainment of four months.

Case II

History obtained from medical records, MDC, a white female, was born following a full term gestation with uncomplicated labor and delivery. Birth weight was 6 lbs 6 oz, length 21 inches, and head circumference 13 inches. A right valgus foot deformity was noted and she was referred to an orthopedic hospital in Louisville. At one month a correcting short leg cast was applied and a diagnosis of arthrogryposis made.

At age two months, bilateral cataracts were noted.

At age six months, the patient's general phys-



FIG. 1 Case I: Patient at age 8½ months.

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FIG. 2. Case I: X-ray of upper extremity showing stippling and shortened humerus.

ical condition was reported as poor, presenting with marked knee contractures, abduction of the forefeet, bilateral congenital cataracts, epiphysiolitis punctate and retarded growth and development.

When seen by the family physician at 1-1/2 months of age, her weight was 7 lbs 12 oz and head circumference 13 inches. When seen at 3-1/2 months her weight was 9 lbs 12 oz. Evidence was found of bilateral cataracts and retarded growth and development. Sweat chloride test and chest x-ray were normal, and the patient was referred to an orthopedic hospital in Louisville.

Further x-ray studies revealed generalized, marked, osseous abnormalities, particularly shortened humeri, and stippled epiphyses of the proximal humori and femori. The patient was then referred to the Child Evaluation Center of the University of Louisville School of Medicine.

Physical examination of this 8-1/2 month old child revealed a weight of 13 lbs. 1 oz. (below 5th percentile) with a height of 25-1/4 inches (below 5th percentile) and head circumference of 38-1/2 cm. (below 2nd percentile) (FIG. 1). She appeared to be in no acute distress.

Cranial examination revealed slight asymmetry of the skull, microbrachycephaly and frontal bossing. The anterior fontanelle admitted two fingers, but was not bulging. She presented with saddle-shaped nose, and low set ears. Her lips were thin and cresent shaped and the oral cavity revealed high arched palate and no dentition.

Examination of the extremities revealed short fingers with proximally placed thumbs. Bilateral simian creases were present. Shortened thighs with limited movement at the hip joints in conjunction with tightened abductors were noted.

Neurological examination revealed increased muscle tone in the extremities with hyperactive deep tendon reflexes. There was some tightening of the Achilles tendons bilaterally. The patient had poor head control and was unable to sit alone or with support. Other neurological findings were within normal limits.



FIG. 3. Case I: X-ray of lower extremities showing stippled areas present in the knee joints and irregularity of the proximal end of the femurs.

Occular examination revealed normal lids, but globes were slightly below average size. Pupils reacted to light. The media revealed dense bilateral cataracts and no details of the structure of fundus could be seen. A halo of red reflex could be seen only around the lens opacities. Vision was believed to be in the range of light perception only, and it was felt that the patient could fix and follow light.

Radiological findings, (FIGS. 2 and 3), revealed stippling of several epiphyses, especially those of the proximal femori and to a lesser extent, the knee joints. The proximal femori and humori showed irregularity and obliquity of the metaphyseal areas. The humeri were short relative to the length of the upper extremities, and the thumbs were inserted low in the hand. The vertebral bodies were ossified in a peculiar manner, appearing like "bow ties" in the lateral projection. A lateral film of the skull was not unusual but specifically noted was ossification of nasal bones.

The patient's general physical condition deteriorated and contractures became more severe. Between the ages of 9 and 13 months she was hospitalized for bilateral otitis media, acute tracheobronchitis and twice for pneumonia. During these admissions a sweat chloride test was reported as negative. She was noted to have the appearance of Down's Syndrome, and bilateral simian creases were noted. At age one year, weight was 9 lbs. 10 oz. with a height of 26 inches. X-rays revealed thickened joint capsules, and punctate calcification of the patellar epiphyses. Bilateral iris atrophy and glaucoma with synechia in the chamber angles were found. She was unable to hold her head up.

At age two years, x-rays of knee joints revealed stippled calcifications and malformations of the proximal ends of both femurs (FIGS. 4 and 5).

At age three years, she was treated in a hospital for multiple rat bites. At age four years, she died of unknown causes. No postmortem examination was performed.

Case III

JMC a white female, was born after an uncomplicated full term pregnancy. Birth weight

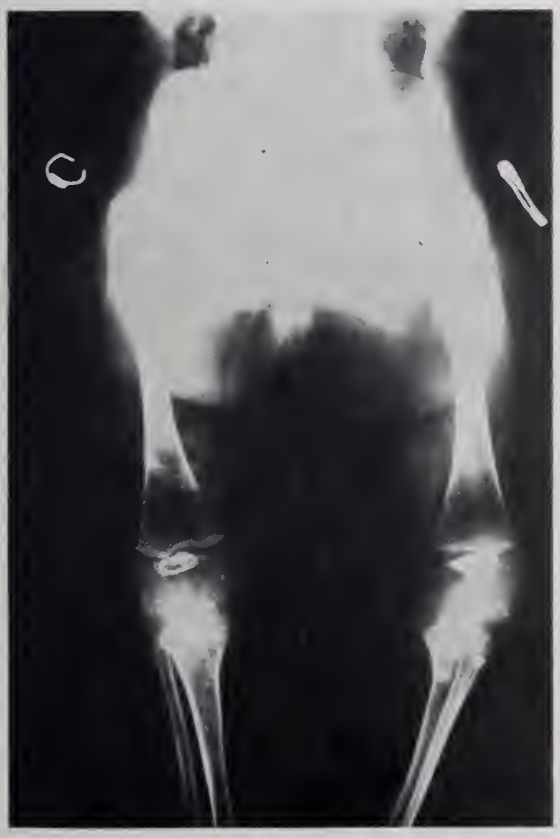


FIG. 4



FIG. 5

Case II: X-ray of knee joints showing stippled calcification and malformation of the proximal end of the femurs.

was 6 lbs. 8 ozs. The infant gradually developed cataracts and "bone abnormalities." Her growth and development were delayed and at five months she died of "pneumonia." The mother was unable to provide any further history.

Pertinent family history taken at the time of examination of the child (Case I) revealed the mother to be 30 years of age and medically well. The non-consanguinous father was 42 years of age and partially disabled due to trauma. Neither parent presented any manifestation of the disease.

Siblings were as follow:

1. Female weighing 3 lbs. 10 oz. at birth expired at two days. According to the mother this infant had "several abnormalities of the feet." No further information was available.
2. Female, 12 years of age with a history of infantile febrile convulsions, but otherwise medically well.
3. Male, 11 years of age, medically well.
4. Female (Case II)
5. Female, 8 years of age, medically well.
6. Female (Case III)

Further family history of genetic pertinence reveals that a maternal half uncle and maternal second cousin were born with club feet. A maternal second cousin was reported to be "mentally retarded." Two maternal first cousins were born with harelips and cleft palates. A maternal aunt married her first cousin and had a child with "eye problems."

Comment

Because of the predictability of this disorder, it is important for the physician to be aware of all its clinical manifestations and radiological findings so that he may establish a definitive diagnosis, anticipate complications and render prognosis and genetic counseling. The authors feel that the literature pertaining to Conradi's Syndrome along with the addition of this family should help to convince the reader this is an inherited disorder rather than a sporadic disease.

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Medical Progress

Mycoplasma Pneumoniae Infection: A Review

Martin J. Raff, M.D.*

In 1898, Nocard and his co-workers discovered mycoplasmal infection in animals[69]. Dienes and Edsall[18] first isolated a mycoplasma from man from a Bartholin gland abscess in 1937. It was 46 years after Nocard's discovery before Eaton *et. al.* [19] isolated an organism from a human with the syndrome of primary atypical pneumonia (PAP), and an additional 17 years for Marmion and Goodburn to publish results indicating that Eaton's agent was a pleuropneumonia-like organism rather than a virus[61]. Work by Liu and associates[55,56] enhanced our understanding of immunological responses to these organisms, as well as showing their localization in the bronchial epithelium of chick embryos. In 1962 Chanock, Hayflick and Barile[8] cultivated the agent of cold-agglutinin positive PAP on an artificial medium and identified it as a mycoplasma. This agent reacted with convalescent sera from patients with the disease and failed to react with acute phase sera or with antiserum prepared against other mycoplasmas. With the experimental production of pneumonia in human volunteers[11] Koch's postulates were fulfilled and the etiologic agent of cold-hemagglutinin positive PAP was named *Mycoplasma pneumonia*[4,82].

Indirect evidence implicating mycoplasma as the etiologic agent of a wide variety of other human diseases has been accumulated. Despite this, *M. pneumoniae* remains the only species of mycoplasma whose pathogenicity for man has been proven unequivocally[9,10,57]. Infections with this organism involve the upper respiratory tract of both adults and children and in addition to primary atypical pneumonia, may result in bullous myringitis, pharyngitis, broncheolitis and tracheobronchitis.

Epidemiology

The great majority of infections with *M. pneumoniae* occur in individuals between the ages of five and 40 years. This is in distinct contrast to the age range for pneumococcal pneumonia which primarily affects the very young and the very old. The incidence of clinical pneumonia in *M. pneumoniae* infections has varied in different studies between 3 and 70 percent [1,3,7,31]. The organism appears to be responsible for approximately 10 to 20 percent of all cases of pneumonia, but figures vary widely[7,23,41,63]. A higher incidence seems to prevail in areas where close crowding prevails, particularly in military encampments[7,63,84]. Communicability appears to be of a low degree and progression of the disease within a community is usually slow [31,84], but epidemics do occur[25] with at least one of these being explosive in nature with rapidity of spread similar to that seen in influenzal outbreaks[25].

Environmental factors which have enhanced susceptibility to mycoplasma infection include trauma, administration of anesthesia, and depression of host resistance by other concurrent infections, malignancies, drugs, surgical procedures, malnutrition or abnormalities of both the cellular and humoral immune systems.

Frequently there is lengthy persistence and excretion of *M. pneumoniae* in the nasopharyx[1,3,31,53,80] even following adequate therapeutic antibiotic regimens. This persistence cannot be explained by development of resist-

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ance to antibiotics[1,3]. These facts seem to support the theory that droplet transmission of the organism between individuals in close contact is the most probable means of spread.

There is a fairly constant incidence of infection throughout the year with some rise in case numbers occurring during the late summer and early autumn. Several investigators have suggested that a cyclic pattern of infection exists with peaks in the incidence of infection occurring every four to five years[22-24,51].

Mycoplasma Pneumoniae Infection

Clinical Presentation: There is a wide spectrum of clinical symptomatology following infection with *M. pneumoniae*. This is true in both experimental[73] and naturally occurring infection[9,12,15,40,64]. Pulmonic involvement appears to be the pathologic feature most frequently recognized in *M. pneumoniae* infection. Prior investigations have indicated that clinical pneumonia usually appears in from 3 to 10% of individuals infected with *M. pneumoniae*[6,11,16]. A recent epidemiologic report showed a 27% incidence during an acute outbreak[25], and as high as 70% has been reported. The duration of the incubation period is variable, depending in part upon whether it was determined during the course of natural infection[31] or experimental infection[16], the latter being somewhat shorter. A reasonable compromise estimate would seem to be two to three weeks.

There is no diagnostic pattern of symptoms. Onset is gradual, with headache, earache, coryza, sore throat, fever, chills, myalgias and generalized malaise predominating. The headache will frequently be frontal or supraorbital, usually of greater severity than in some other types of pneumonia and will frequently be the major presenting complaint. Coryza will not usually be as severe as in other forms of pneumonic infection. These prodromata are followed in from three to five days by a severe persistent irritative cough which is either nonproductive or productive of only small amounts of thick non-tenacious white sputum. On occasion the sputum may appear purulent and minor degrees of hemoptysis occur. Gram stain of this material will reveal an abundance of leukocytes and sparse numbers of organisms of varying nature without a predominant morphological pattern. Dyspnea is uncommon, as is pleuritic pain but the patient may frequently complain of substernal pain which is secondary to tracheitis. Anorexia, nausea, vomiting and abdominal pain may also be present and infrequently the patient will note the appearance of a non-descript cutaneous eruption[28]. Conjunctival irritation and arthralgia[50,53] may occur but are unusual. On physical examination the patient may not appear extremely ill, but severe clinical disease is not uncommon. Fever ranges from 100-103°F, seldom exceeding 104°F.

Shotty cervical lymphadenopathy may be found, particularly in patients complaining of sore throat and having pharyngeal hyperemia on examination. Otitis media, otitis externa and bullous myringitis which may be hemorrhagic have been reported[11,13,73,81]. The myringitis has been primarily confined to younger patients (e.g., five to 15 years old) and is of low incidence. An exception to this is noted in Evatt's report of an epidemic among college students in which 12% of those infected developed myringitis[25]. Dry crepitant rales are the most constant pulmonic finding, being usually bibasilar but frequently audible through all lung fields. These will persist and resolve slowly, usually following some period of time after the disappearance of clinical symptoms. Physical signs of consolidation, or the presence of pleural friction rubs occurs infrequently. Pleural effusion has been considered a rarity in this disease[17,35,43,70]. A recent report by Fine *et. al.* has indicated that effusions may be more common than previously assumed[30] but these may not be clinically apparent except through the use of special procedures[34]. Nakas and his associates were recently the first to be successful in isolating *M. pneumoniae* from pleural effusion obtained by thorocentesis from an 8-1/2-year-old boy with mycoplasma pneumonia[66].

Radiology

The typical radiologic pattern seen in mycoplasmal pneumonia cannot be distinguished from other forms of "atypical pneumonia" but often differs markedly from most forms of bacterial pneumonias[35,43,74]. The reticular or interstitial pattern of infiltrate described by Ziskind *et. al.* as a typical feature of viral

pneumonitis[91] is usually seen early in the course of mycoplasma pneumonia. As the disease progresses, desquamation of cells lining the alveoli and patchy intra-alveolar exudation produces a combined radiologic appearance of small bronchopneumonic patches of consolidation superimposed on the reticular pattern already present. Hilar prominence is frequently present with infiltrate radiating out in a fan-like pattern. The lower lobes tend to be involved to a greater extent than other areas of the pulmonary parenchyma. The upper lobes may be involved in about 25% of patients[36,64] and the appearance may then mimic tuberculosis. Late in the course of the disease dense areas of consolidation may produce a radiologic picture identical to those seen in bacterial pneumonias. On some occasions this may be the initial appearance in mycoplasma pneumonia rendering the x-rays of little value in making a differential diagnosis. Radiologic findings may persist for long periods of time[52].

Laboratory

Laboratory values are seldom of diagnostic value. Leukocyte counts are usually in the range of the normal. Foy *et. al.*[31] showed that only 25% of their patients with mycoplasma pneumonia had white blood cell counts greater than 10,000, while counts were above 10,000 in 52% of other pneumonias. Differential white cell counts are also usually normal but slight lymphocytosis and monocytosis may be seen. Anemia is not a usual concomitant of *M. pneumoniae* infection but hemolysis and positive Coombs' tests have been reported [26,27,44,48], as well as positive tests for antinuclear antibodies[48]. Other unusual immunological responses seen in *M. pneumoniae* infections have included false-positive serologic tests for syphilis, antibodies to brain and lung, and cold hemagglutinins. Agglutinins for *Streptococcus MG* which appear both in the natural disease and following immunization with live mycoplasmas have not yet been fully explained. The erythrocyte sedimentation rate is usually elevated, with levels of 50-80 mm/hr. being quite common.

Routine bacteriological cultures of sputum reveal normal flora. *M. pneumoniae* can be cultured on appropriate media, and positive culture may persist for weeks following successful antibiotic therapy[79,80]. Unfortunately due to the fastidious nutritional requirements and slow growth rate of *M. pneumoniae,* cultures seldom become positive until two weeks after the patient is cultured, rendering them of only retrospective value.

Several serologic reactions aid in the diagnosis of *M. pneumoniae* pneumonia. Cold hemagglutinins are positive in approximately 50 to 90% of cases[5,9,57]. This is the first antibody response which can be detected [13], but is a non-specific response and may be found in patients with other diseases[42,86]. Positive responses develop with a greater degree of frequency in patients with more serious mycoplasmal infection[5], and although non-diagnostic, high titers in patients with pneumonia are strongly suggestive of a mycoplasmal etiology. The complement-fixation test for the detection of anti-mycoplasma antibodies is a simple procedure and is available in commercial kit form. Fourfold rises in titers are diagnostic of infection and correspond closely to isolation of the organism when cultural attempts are made. Other sophisticated procedures for measurement of antibody response include immunofluoresence, growth inhibition, indirect hemagglutination and neutralization tests, but these are impractical for routine use in the clinical laboratory.

Clinical Course

Although the clinical course of mycoplasma pneumonia is variable[52], recovery in untreated patients is usually slow, and signs and symptoms as well as radiologic findings of pulmonic involvement may persist for some time[52]. Cough and rales are usually gone by 14 to 21 days following the onset of symptoms. Chest x-ray abnormalities are frequently present four weeks following the onset of symptoms, but usually vanish by 8 to 10 weeks[52]. Long term persistence of pleural thickening may occur in those patients with pleural effusion[17,65]. Symptoms not directly related to the respiratory tract, such as fever, headache, myalgia and malaise usually disappear seven to ten days after onset of symptoms. The course of the disease may be abbreviated by appropriate therapy, as discussed below.

The disease is rarely fatal[12,20,55,60,68] and complications are infrequent. Bacterial super-

infection is uncommon[39,62,65,70]. Hemolytic anemia has been reported[14,26,27,44,48] and may have been at least partially responsible for two of the reported fatalities[60,68]. One of these cases was also complicated by intravascular coagulation and renal failure[68].

Unusual cutaneous complications[38] have included the Stevens-Johnson syndrome[2,47,58,75], erythema multiforme minor[14,59], erythema nodosum[37,39], vesiculopustular eruption[88] and other nonspecific skin lesions[28,29,38].

Central nervous system disturbances that have been described in relation to mycoplasma infections[46,85,90] include meningitis and meningoencephalitis[6,78,87], focal encephalitis[72], Guillain-Barre polyradiculitis and ascending paralysis[21,45,46,76], acute cerebellar ataxia[83], disturbances of sensorium[1,76,90], and hemiplegias[89,90]. It should be strongly emphasized, however, that the bulk of these are observed associations and that a causal relationship between *M. pneumoniae* infection and central nervous system pathology remains unproven.

Cardiovascular disorders in association with *M. pneumoniae* infection have included pericarditis[39,53] and symptomless myocarditis which was evidenced by electrocardiographic changes[54].

The clinical course of this disease and its epidemiological pattern, with a predominance of patients being in the lower age groups, would suggest that lasting immunity is conferred upon those who recover from active infection. This assumption seems valid on the basis of clinical experience, but a recent report by Foy and associates documents a case of *M. pneumoniae* pneumonia occuring 4-1/2 years after recovery from a previous episode[33]. These authors suggest that immunity may not be long lasting.

Therapy

As would be expected of an organism lacking a cell wall, *M. pneumoniae* is resistant to penicillin [49,79]. Most strains of *M. pneumoniae* are sensitive to both tetracycline and erythromycin[49,79], although resistance to erythromycin has been reported[67]. In controlled clinical studies [52,71,77], both tetracycline and its derivatives and erythromycin have been found to alter markedly the clinical course of the disease. Treatment usually results in patients becoming afebrile within 48 hours and the duration of the remainder of clinical symptoms is halved. Antibiotic therapy is also effective in accelerating the resolution of pulmonary infiltrates as seen by chest x-rays. It is interesting, as noted above, that mycoplasmas may still be cultured from patients despite two-week courses of therapy with complete clearing of signs and symptoms of disease[1,3,31,53,80].

It is recommended that the choice of therapeutic agent be based upon the differential diagnosis and on history of prior adverse reactions to either agent. In situations in which the differential diagnosis lies between pneumococcal pneumonia and mycoplasma pneumonia, erythromycin in a dosage of 1.5 to 2.0 grams each day for 14 days is the drug of choice. When the choice lies between mycoplasmal and the other non-viral, non-bacterial interstitial pneumonias, such as psittacosis and Q-fever, tetracycline, 2.0 grams each day for 14 days is effective. Clinical relapses following a course of antibiotics may occur, and are usually responsive to a repeat course of treatment with the same agent. Therapy does not appear to alter the antibody response to this disease[32].

Lincomycin and cleomycin appear to be effective against *M. pneumoniae in vitro* but have not yet undergone extensive clinical trials in patients with mycoplasma pneumonia.

Other therapeutic modalities include bed rest, adequate nutritional and fluid support, antitussives and respiratory support with oxygen and intermittent positive pressure breathing when necessary.

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GRAND ROUNDS



The University of Louisville School of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

Iatrogenic Respiratory Failure

EVERY agent with which patients are treated has certain undesirable effects which may be seen when given in the usual dosage, when given in increased dosages, when given under unusual physiological circumstances, or when given in combination with other agents. This review will discuss respiratory failure secondary to the administration of several agents as listed in Table 1. Although respiratory failure may be caused by some of these agents in otherwise normal persons, most of those so-affected have respiratory insufficiency usually due to chronic obstructive pulmonary disease.

The following case will serve to introduce the problem:

E.K., a 64-year-old man with severe chronic bronchitis, respiratory insufficiency, right heart disease and right heart failure was seen in the emergency room because of increasing shortness of breath. Since he was in obvious respiratory distress and was cyanotic, he was started on nasal oxygen, then admitted to the hospital. Within about 30 minutes of his admission to the medical ward, he was noted to be quite diaphoretic, hypotensive and was becoming confused. He still was cyanotic. His arterial PO_2 was 36 mm Hg, the PCO_2 greater than 100 mm Hg, the pH 7.08, and the bicarbonate 24.6 mEq/L, indicating severe hypoxia and acute respiratory acidosis. The patient immediately was intubated and then ventilated on a volume cycled respirator for five days, following which he improved to the point that he could be discharged home on his usual medications plus home oxygen.

From the Department of Medicine, University of Louisville School of Medicine, Louisville

Comments

Patients with pulmonary insufficiency manifested by chronic carbon dioxide retention and hypoxia may become apneic when given oxygen[1]. It appears that most ambulance drivers, hospital attendants, some nurses and even a few doctors are unable to tolerate a patients' cyanosis longer than it takes to turn on the valve of an oxygen cylinder. This is unfortunate because many of these patients have either very poor or no response to carbon dioxide and therefore are dependent upon their hypoxic drive to respiration. When this drive is abolished by giving oxygen there no longer is any stimulus for respiration so that such patients gradually become hypopnic and finally apneic as exemplified by the above patient. One should not feel entirely secure about using low flow oxygen since respiratory depression occasionally has occured in patients receiving 2 L/min of nasal oxygen. Under these circumstances, arterial blood gases should be one's guide to therapy with oxygen.

All potent narcotic analgesics may produce significant respiratory depression when given to healthy subjects but respiratory failure in these individuals is uncommon. Keats and Girgis[2] studied carbon dioxide response curves in postoperative patients who had received intravenous injections of meperidine (Demerol) and found the curves shifted rightward, indicating respiratory depression (FIG. 1). So called non-narcotic analgesics such as pentazocine (Talwin) are said to cause less respiratory depression than narcotics. Though this may be so, the use of these drugs is followed by significant respiratory depression in normal patients[3] (FIG. 2). Therefore, more deleterious effects could be expected in patients with

respiratory insufficiency.

Barbiturates in ordinary dosage may cause severe respiratory depression in patients with chronic obstructive pulmonary disease, probably by decreasing neurogenic drive to respiration originating in the reticular activating system, and by reducing sensitivity of medullary respiratory centers to pH and PCO_2[4]. Other sedatives have less effect. It has been said that tranquilizers have little or no effect on respiration, but diazepam (Valium) and chlordiazepoxide (Librium) have the capability of further depressing respiratory drive in chronic obstructive pulmonary disease patients[4]. Chlorporamazine (Thorazine) is somewhat safer[5], but has also been incriminated.

In 1968, Goldring et al, published a study of respiratory adjustment to chronic metabolic alkalosis in man[6]. It was shown in normal human subjects that metabolic alkalosis caused by Trishydroxyenethylamine methane (THAM or Tris buffer), sodium bicarbonate and ethacrynic acid was associated with alveolar hypoventilation, evidenced by rising arterial PCO_2, falling arterial PO_2, decreasing tidal volume and diminished ventilatory response to inhalation of five per cent carbon dioxide. These responses were not found when thiazide diuretics or aldosterone were given. Jarboe has confirmed the similar respiratory effects of furosemide[7].

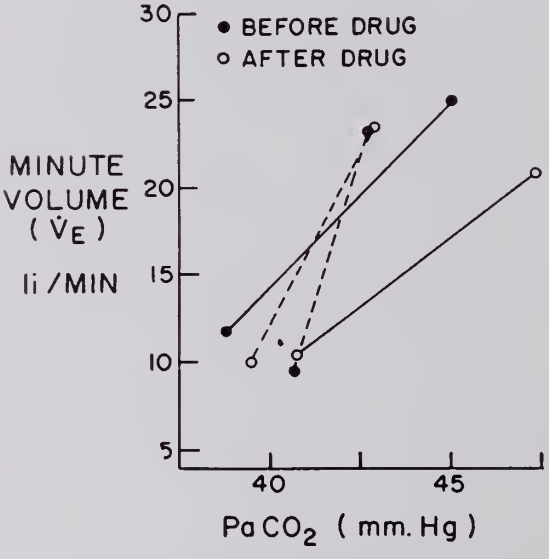


FIG. 1. CO_2 response curves before and after meperidine (solid line), plotted from mean data of 13 postoperative patients on the first postoperative day. Meperidine produced a 20% decrease in slope and displaced the curve to the right by 3.4 mm Hg. $Pa._{Co2}$ (respiratory depression). The CO_2 response curves before and after placebo (broken line) for the one patient who obtained complete and sustained pain relief following a placebo are also shown. The post-drug curve is displaced slightly to the left suggesting respiratory stimulation. (From Keats and Girgis[2])

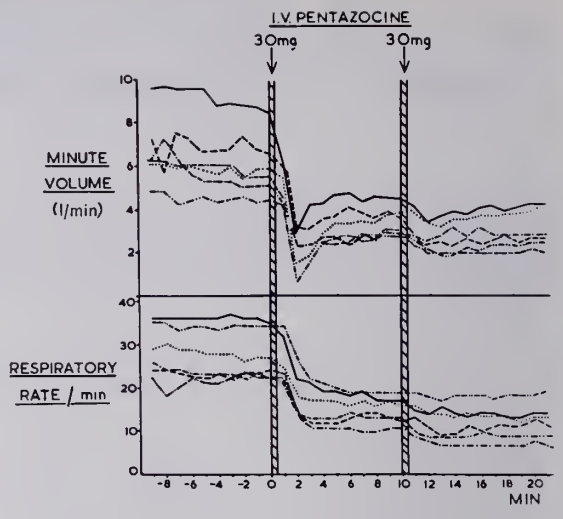


FIG. 2. Changes in minute volume and respiratory rate in six patients receiving intravenous pentazocine (2 x 30 mg). (From Davie et al[3])

FIG. 3[6] illustrates the relationships of serum bicarbonate and arterial PCO_2 and pH during induced alkalosis in normal human subjects. Alkalosis induced by thiazides and aldosterone is associated with normal arterial PCO_2, whereas alkalosis caused by sodium bicarbonate, Tris buffer and ethacrynic acid is associated with higher PCO_2 levels. These two groups also differ in that those with elevated PCO_2 and bicarbonate have abnormal carbon dioxide response curves indicating respiratory depression as compared to those with normal PCO_2 and alkalosis. Tris buffer and bicarbonate apparently cause hypoventilation as a consequence of buffering hydrogen ions. Ethacrynic acid and furosemide cause both

Table 1

Agents Which May Cause Respiratory Failure

Narcotics	Meperidine
Sedatives	Phenobarbital
Tranquilizers	Diazepam
Buffering agents	Sodium bicarbonate
Diuretics	Ethacrynic acid
Antibiotics	Neomycin

hydrogen and potassium loss by the kidneys, the former being the most important. In either case, for reasons not well understood, decreasing responsiveness of respiratory centers occurs, resulting in hypoventilation and respiratory acidosis in susceptible patients. The diuretics are not known to cause acute respiratory depression. But both groups of drugs may induce hypoventilation when given orally over a several day period[8-10]. Metabolic alkalosis induced by intravenous sodium bicarbonate has been shown to inhibit respiration as manifested by diminished response to inspired carbon dioxide, probably due to buffering of hydrogen ions by bicarbonate[9].

Table II

Antibiotics Which May Cause Neuromuscular Blockade

A. Competitive blockade, reversed by neostigmine
   1. Neomycin
   2. Kanamycin
   3. Streptomycin

B. Noncompetitive blockade, not reversed by neostigmine, but often reversed by calcium gluconate
   1. Polymyxin B
   2. Colistimethate

Hypokalemia may result from the use of diuretics such as thiazides, ethacrynic acid and furosemide; from corticosteriods; from osmotic diuretics such as mannitol; from administration of insulin and bicarbonate in diabetic ketoacidosis; from the use of parenteral fluids over several days; all without giving replacement potassium[11-13]. When extremely severe, hypokalemia may impair neuromuscular function resulting in weakness to frank paralysis, thus rarely being a cause of hypoventilation.

Respiratory muscle paralysis due to an antibiotic was first described by Pridgen[14]. His patient suffered respiratory arrest thought due to intraperitoneal neomycin. Many other such cases have been recorded due to neomycin[15] and as can be seen in Table 2, other antibiotics may do this by either competitive or non-competitive neuromuscular blockade[16-25]. Since the treatment is different it is important to recognize the kind of blockade that exists. No reports of respiratory failure due to gentamycin have been found, but its molecular similarity to streptomycin, neomycin and kanamycin make this a theoretical possibility.

Most patients affected thus by antibiotics have had azotemia due to underlying acute or chronic renal disease. The syndrome may begin with restlessness, dyspnea, difficulty swallowing, blurred vision and slurred speech. Increasing respiratory difficulty gradually develops with apnea appearing in from three to ten hours after injection of the drug. A few patients have developed respiratory failure after only one dose, but most have done so after multiple doses. There may be some danger of instilling antibiotic solutions into the peritoneal cavity after abdominal surgery, particularly if a neuromuscular blocking agent has been administered.

The management of patients with drug-induced respiratory failure is straightforward. Endotracheal intubation should be done immediately and respiration controlled until the patient is again able to ventilate adequately as evidenced by serial arterial blood gases. Agents capable of causing respiratory failure should be stopped. Give neostigmine 1.0 mg intravenously to a patient whose paralysis is due

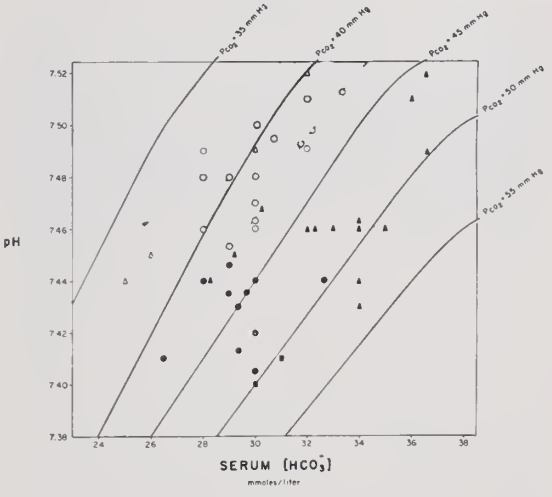


FIG. 3. Relationship between the concentration of bicarbonate in arterial serum, the arterial blood Pco^2 and the arterial blood pH during induced metabolic alkalosis. The shaded area represents the control range of Pco^2 group is shown by open symbols, circles representing alkalosis induced by thiazide diuretics and open triangles —alkalosis due to aldosterone. The high arterial Pco^2 group is shown by solid symbols; alkalosis induced by sodium bicarbonate (dark circles), THAM (dark squares) and ethacrynic acid (dark triangles) is associated with high values for arterial block Pco^2. (From Goldring et al[5])

to neomycin, kanamycin or streptomycin; or give calcium gluconate 20 to 30 mg intravenously over 10 to 15 minutes to patients who had received polymyxin B. or colistimethate. Additional increments of these drugs may be given. For hypokalemia, give intravenous potassium chloride with frequent monitoring of serum electrolytes. Acetazolamide (Diamox) may be useful in patients with severe metabolic alkalosis secondary to bicarbonate and diuretics.

Summary

Many drugs routinely prescribed by physicians are capable of causing respiratory failure especially in persons with respiratory insufficiency, but occasionally in normal individuals. This effect may or may not be dose-related, and is infrequently seen. But it occurs often enough that physicians must be aware of the possibility, particularly in those patients with chronic obstructive pulmonary disease and respiratory insufficiency.

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SPECIAL ARTICLES

A Model of Health Services in a Recreational Area

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JAMES RANSOM**** AND JAMES CRAIG****

LAND Between the Lakes, a 170,000-acre recreation and conservation education area being developed by the Tennessee Valley Authority (TVA) in southwest Kentucky and western Tennessee, is part of a rapidly developing recreational region. Located between Kentucky Lake and Lake Barkley, it is within an easy drive for more than 70 million people, and is an increasingly popular tourist attraction. An estimated 1.5 million people visited the area in 1970, and a projected six million people wil visit there in 1980. This great influx of people into the area each year creates a seasonal impact on the service facilities of the region. Health services are among the more over-burdened resources.

With these factors in mind, TVA, physicians from communities in the surrounding area, Vanderbilt University School of Nursing and Tennessee Mid-South Regional Medical Program (RMP), joined resources in 1970 to study the problem and determine a means of serving the health needs of visitors without overburdening the practices of area physicians. It was hoped that from this effort a model of health care delivery could be developed that would be viable for other small towns and rural areas, as well as other large Federal or state recreation areas.

By means of a survey conducted in the summer of 1970, it was determined that approximately one per cent of Land Between the Lakes visitors would incur an illness or injury and might use a health service facility in Land Between the Lakes, if one existed. Further, by asking local physicians to keep a record of persons visiting their offices who were visitors to Land Between the Lakes, the types of illnesses and injuries incurred were judged.[1]

The results of the survey suggested that the volume of persons experiencing illness and injury was sufficiently large to warrant supplementary health services, and that most of the illnesses and injuries could be appropriately handled by nurses consulting with physicians by telephone.

Planning

Early in 1971, several meetings were held among TVA staff, local physicians, faculty nurses from Vanderbilt University and RMP staff to determine if such a health service were feasible. A plan was developed to install a trailer in a central location in Land Between the Lakes and equip it with the necessary supplies and equipment to house the nurses for a health station service. The group agreed to undertake the project as a joint effort.

Advice and endorsement were sought from appropriate professional organizations. The proposal was submitted to the Kentucky Medical Association Judicial Council for determination of possible ethical conflicts and consideration of the quality of health services. The Judicial Council considered the problem, approved a trial period (summer, 1971) for the service and this facilitated the physicians' participation.

Method

A mobile facility was established in the center of Land Between the Lakes, and operated for 10 weeks, from June 28 to September 6,

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****Representative, Tennessee Valley Authority

1971. It was staffed by nurses experienced in primary care, especially in emergency procedures, and was connected by telephone with private physicians in five nearby communities. These physicians scheduled their coverage on a 24-hour, seven-day-a-week basis to insure availability to the health station nurses. TVA furnished the trailer and obtained the medical supplies. RMP paid the nurses' salaries and furnished the communication equipment (telephone and radio), and the physicians provided the consultation. All parties agreed on a fee for the health station service, with the income to be distributed equally between the physicians and the health station to defray costs.

RMP obtained the liability insurance coverage for the nurses, TVA and RMP. Investigation of the professional liability coverage for the physicians pointed to the importance of their not forming a legal partnership or corporation. By providing 24-hour coverage of the health station on an individual basis, the customary professional liability policy carried by all physicians would protect them.

Announcements of the health station and the types of function it would serve were distributed to visitors in Land Between the Lakes and were posted in appropriate locations. A health station record form was constructed specifically for keeping records of persons seen.

Results

(1) The distribution of patients' illnesses and injuries (percentage in each category) for the two years is similar, although the totals differ.

(2) Thirty per cent of all the cases handled by the nurses were treated by telephone consultation with a doctor. Forty-five per cent of the cases were handled without physician consultation. Therefore, it can be assumed that 65-75% of visitor health needs seen at the station can be adequately cared for by appropriately trained nurses with telephone consultation available from a physician.

(3) Twenty-five per cent of the patients seen in the health station (Column A) were sent to a physician. By comparing the diagnoses, it is fair to suppose that a significant percentage of those seen first by a physician (Column B) who did not stop first at the health station could have been cared for at the health station.

(4) Visitors at the health station filled out an anonymous questionnaire which was used to rate the overall acceptance of the health station services. Eighty-eight per cent of the patients rated the services "Excellent," with the remaining 12% rated "Good." One hundred per cent of the patients said they would return to the health station again if they needed the services.

Conclusions

During evaluation of the health station service by the participants following the summer's activities, the following conclusions were drawn:

(1) The service was effective and useful. It offered quick, efficient handling of most ill-

Table 1

	TOTAL NEEDS 1970-SURVEY	PER CENT OF TOTAL (1970)	HEALTH STATION-1971 (A)	PHYSICIAN 1971 (B)	PER CENT TOTAL A&B
Infections (URI, UTI, GI, Skin)	182	41.0%	35 (9)*	47	34.0%
Minor Injuries	94	21.0%	19 (5)	33	23.0%
Lacerations	78	18.0%	12 (4)	23	14.0%
Fractures	11	2.5%	4 (4)	4	2.5%
Eye (injuries and infection)	15	3.5%	6	3	3.7%
Allergy (includes contact)	21	5.0%	9 (1)	3	5.0%
Bites (insect and animal)	16	3.5%	14 (2)	4	7.3%
Chronic Illness	13	3.0%	3	0	1.0%
Other	10	2.5%	17 (7)	7	9.5%
Total	440		121 (30)	124	

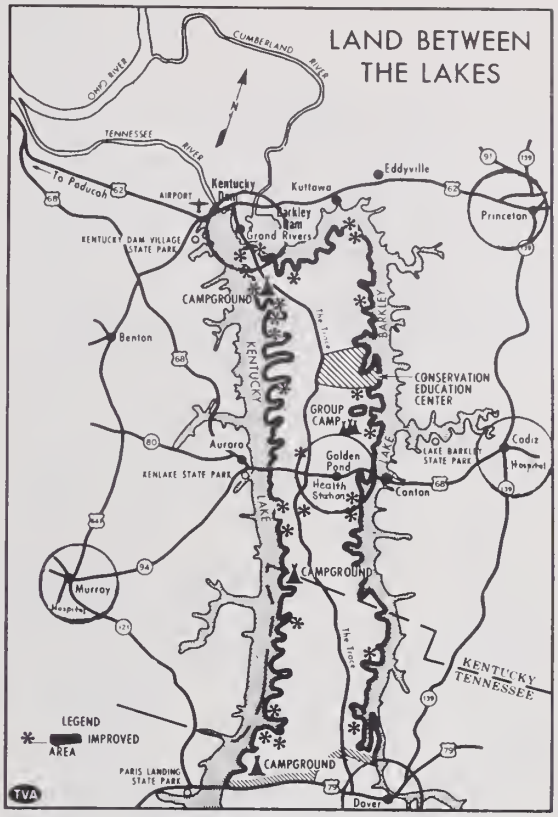
nesses and injuries occurring among the visitors; visitors received assurance of their condition; nonessential use of the area doctors' time was reduced.

(2) The planning coordination among two formal organizations (TVA and RMP), six physicians in private practice in five different locations, and nurses from another location was accomplished without interfering with or jeopardizing any one of the representatives.

(3) The nurses and physicians coordinated their service with mutual satisfaction and effectiveness.

(4) The issues of fee-for-service, insurance coverage, professional support and patient satisfaction were successfully solved.

(5) Patient utilization was lower than anticipated, which may be attributed to one or more factors such as: poor spread of publicity (utilization of the health station increased as the summer progressed, indicating the better spread of information about the service throughout the area); consumer concern for fees; preference for a doctor instead of a nurse for initial care; the fixed location of the health station.



Doctors in nearby Dover, Tennessee and Cadiz, Princeton, Grand Rivers and Murray, Kentucky provided consultation to nurses staffing a health station at Golden Pond, Kentucky, in the center of TVA's Land Between the Lakes.

Recommendations

All participants in the health station service agreed that it was a valuable and worthwhile experience and recommended its continuance, if possible, subject to suggested modifications.

To make the health station more accessible and visible to visitors, a mobile unit which could travel on a scheduled basis to the various camping areas could possibly be added to or substituted for the stationary unit. Equipped with radio communication and necessary supplies, the unit could easily administer to most cases on a "sick call" basis, and still be readily available for emergencies.

Additional use and benefits could possibly be derived by providing health education and screening to the visitors, or by using it as a setting for the training of health students.

In summary, the effectiveness and feasibility of a seasonal health service was deliberately planned and evaluated, with overall results indicating a significantly effective operation, including excellent patient acceptance. The utilization of the health station, we hope, can be increased with the modifications mentioned, combined with a well-planned system of informing visitors of the service.

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Peer Review In Kentucky

Marvin A. Bowers, Jr., M.D.

Last month, Marvin A. Bowers, Jr., M.D., Louisville, Chairman of the State Claims and Utilization Review Committee, terminated his position after more than four years of active service in the area of peer review. It seems, therefore, appropriate at this time to print this, his final summary of Peer Review in Kentucky, which occurred under his leadership.

Editors

In 1968, peer review committees were established by each county medical society, which had a sufficient number of physicians, in addition to a state Committee, by authority of the KMA House of Delegates. Drawing on physicians throughout the Commonwealth, the state Committee was able to become actively involved in peer review and began vigorous operation in calendar year 1969.

One of the immediate goals which was pursued by the state Committee was to establish guidelines for the review function for third party payors, health insurance carriers and health care intermediaries, based on the usual, customary and reasonable concept. Early in its operation, the state Committee also was given the responsibility to review claims for both the Title XVIII and Title XIX Programs.

Through a period of evolution and claims experience, the state Committee developed into a body of 21 members representing each of the major medical specialties. This composition of specialties allowed very broad scale review capabilities. Because there were few claims to review involving some of the less common specialties, however, some committee members' services were not required on an active basis, but these specialists were maintained for consultative purposes.

After a period of approximately two years, we recognized that with the widely scattered physician and patient population existing in Kentucky, there might be a more effective and sophisticated review system possible. For this reason, and to provide review coverage to those areas where county society committees were not in existence, peer review committees were established in each of the 15 KMA Trustee Districts. In order to familiarize the members of the Trustee District Committees with the review process, a series of four workshops was held where representative claims were actually reviewed by the workshop attendants.

Up to this point, financing for all peer review activities had been accomplished through normal KMA resources. With the growth of the KMA peer review program, it was seen that evaluation of potential additional aid sources was necessary. Arrangements were made with the Comprehensive Health Planning Council to provide additional funds for review activities and support of the intent of the area-wide health planning concept.

According to health insurance carriers and governmental medical programs which have submitted claims to the review mechanism for adjudication, the system has been effective to the extent that **claims review** is rapidly ceasing to be a major problem in relation to claims volume. This, of course, is directly attributable to the effectiveness of the various peer review committees. However, the capability for effective utilization review does not exist within the mechanism due to the absence of comparison norms and statistics. The compilation and validation of such norms is the current major objective of peer review activities. Our most recent effort, therefore, has been to evaluate the best possible methods and resources for establishing the necessary operation for effective **utilization review.**

What we feel to be a major accomplishment has been publicizing the beneficial value and affirmative aspects of peer review to both the patient-public and the profession. Efforts in this area have included numerous speaking engagements, an information brochure and a peer review newsletter.

A major shortcoming of the mechanism as of this date is seen as an excessive time required for processing and review of some claims by component level peer review committees. These "delinquent claims" may prove to be as disruptive to the objectives and affirmative aspects of peer review as any other factor.

KMA was a leader in peer review when that term was relatively unknown. Kentucky remains a leader because of the acceptance of the concept and the cooperation in the project by a sizeable majority of our fellow physicians. This acceptance and cooperation has not come easy and therefore should be strongly emphasized and reinforced.

In our experience, it is worthy to note that peer review has identified what appears to be approximately only two per cent of the state's doctors who are, or were, actual abusers of the responsibilities with which they are entrusted.

Peer review is intended as an educative vehicle through which the profession can learn and grow. That it has sometimes acted in a sanctionary or cost control role is very secondary to the assurance of **quality care** it has allowed. Moreover, it can ably serve as a protective device from arbitrary claims practices or judgments by health insurance carriers, as it has often done.

This past four years has been a rewarding period for me. Peer review in Kentucky has shown much progress and has the potential for even greater accomplishment, so long as sincere interest by the profession is maintained.

I urge your support for this effort.

Abortion Referral Agencies

ON February 9, 1972, the KMA "Communicator" carried a notice that the Judicial Council considered the use by physicians of referral agencies in arranging for legal abortions outside Kentucky as unethical. This ruling was based upon the following considerations.

Immediately following passage of the law legalizing abortions in New York, enterprising physicians, hospitals and laymen sensed the tremendous opportunity for making money which this statute afforded. Physicians organized corporate referral agencies and then contracted with those agencies to provide complete medical and hospital service to its clients. Hospitals circularized the medical profession all over the country, describing the facilities available there for the performance of abortions, including the names of staff members who were available for this service.

Laymen organized referral agencies which engaged in nationwide advertising campaigns (you saw some of the billboards in Kentucky) offering "package deals" including medical and hospital services at a fixed price which, of course, included a margin of profit for the agency.

The Pulaski County Medical Society adopted a resolution on April 8, 1971, calling upon KMA and AMA to "study means to stop the open solicitation of referrals for abortion by any and all groups and to consider physicians who cooperate with them unethical. This Society considers such action unethical and detrimental to the image of American Medicine."

On September 21, 1970, the AMA Judicial Council had issued a news release on the subject which contained the following statements:

"The Judicial Council, in the strongest terms possible, condemns the commercialization of the medical procedure of abortion.

"Regardless of one's convictions concerning abortion, either therapeutic or economic, all must unite in protesting commercialization and hucksterism in this sensitive area.

"Even though laws have been liberalized and abortions are permitted for therapeutic or other reasons, the procedure remains a medical procedure. If it is to be done, it must be done strictly in accord with the highest standards of medical practice. The rights of the patient must be respected and ethical principles observed just as in any other medical procedure.

"The ethical principle remains: no physician may solicit patients. A physician may not do indirectly that which he may not do directly. He may not permit others to solicit patients for him.

"The medical profession, county and state medical societies, and also the public must cooperate to preserve and protect the highest standards of medical practice in all its aspects. The establishment of abortion mills must not be permitted."

On October 20, 1970, the Medical Society of the County of New York, taking note of the fact that 11,288 abortions had been performed in New York City between July 1 and August 22, censured a New York hospital for circularizing the medical profession with descriptions of its abortion facilities and services, concluding that such circulars constituted "improper ad-

vertising of the services of the doctors on your staffs."

The State of New York took a similar view of the matter, and the hospital agreed to cease and desist from any further advertising.

At its December, 1970, meeting, the AMA House of Delegates adopted Resolution 23, as amended, which read as follows:

"Resolved, That the American Medical Association use its influence with local medical societies to urge that proper disciplinary action be taken whenever physicians are involved in the solicitation of patients for abortion or any other medical service."

On May 12, 1971, the Medical Society for the County of New York took similar action against a "Women's Medical Center" which had announced the "formation of a Research Division in its Department of Social Service —the purpose of which is to gather information that will be helpful to medical and professional personnel in the general area of therapeutic abortion." This announcement was characterized as a "flagrant violation of the Principles of Professional Conduct and threatens the doctors connected with the hospital."

On May 14, 1971, the Supreme Court of New York ruled that the Abortion Information Agency, Inc. was "a broker in the sale of medical and hospital abortion services" in violation of "the public policy of this state."

The same court enjoined Martin Mitchell of Martin Mitchell Referral Services, Inc. from soliciting referrals (at $750 each) for six physicians who had leased office space from him under a fee-splitting arrangement. It also required Howard Weitzmer, M.D. (who was the principal stockholder in three corporate referral agencies) to disclose to the Attorney General the names and addresses of patients obtained from those agencies, in order that he might investigate the possibility of fee-splitting and unlawful solicitations.

The KMA Judicial Council was and is of the opinion that a physician who accepts referrals from a lay agency of any kind, whether it is operated for profit or not, is a party to the solicitation of patients within the meaning of Section 5 of the Principles of Medical Ethics. It is of the further opinion that a physician who utilizes a lay referral agency in arranging a legal abortion for his patient, is guilty of aiding and abetting the solicitation of patients.

A medically-sponsored referral agency may be utilized if no fee is charged by the agency for this service and the referring physician receives no fee from the treating surgeon as a result of the referral. Section 7 of the Principles of Medical Ethics provides that a physician "should neither pay nor receive a commission for the referral of patients."

The Medical Society for the County of New York maintains (for the benefit of the public) a roster of Board certified Ob-Gyn specialists who have indicated their willingness to perform abortions, and upon written inquiry, will supply the names and addresses of three of these specialists (in rotation). An inquiry from a physician would undoubtedly receive prompt attention and obviate the necessity for resort to lay referral agencies. In addition, the AMA Directory and the Marquis "Directory of Specialists" are available as sources of the names and addresses of qualified specialists in New York to whom to refer patients for legal abortions.

One Kentucky gynecologist has indicated to the Council that he likes to refer his patients to "one particular hospital" where he thinks the best care is being provided. The Council finds little justification for referrals to hospitals and strongly urges that all referrals be on a physician-to-physician basis.

KMA Judicial Council
N. Lewis Bosworth, M.D., Chairman
John Dickinson, M.D.
J. Duffy Hancock, M.D.
S. Randolph Scheen, M.D.
Clyde C. Sparks, M.D.

The Medical Foundation Concept†

Joe D. Miller*

WHETHER or not a crisis exists in the delivery of medical care in the United States is debatable. It is evident, however, that revolutionary trends are being advocated by many economists, social planners and politicians . . . trends which revolve almost exclusively around the input-output analysis of health care and its financing.

Whatever our doubts concerning the necessity of change, or our bias concerning the appropriate use and cost of health care services, it seems clear that the future holds profound alterations in patterns of medical practice. It is against this background that foundations for medical care are spreading rather rapidly across the United States. To the best of our knowledge, at least 61 foundations are now incorporated in 22 states. The possibility of foundation incorporation is being actively studied by medical societies in 15 additional states.

This growth, I feel, is significant and raises three basic questions to which I would like to discuss my comments. Namely, 1) What is a foundation? 2) How do they operate? and 3) Why are they spreading?

It is perhaps best to begin with the observation that no single universally accepted definition of a foundation for medical care exists. Due to the differing approaches being utilized in various programs referred to as "foundations," general statements may be highly misleading indeed.

For discussion purposes, however, and in very broad terms, a foundation for medical care may be described in this way: A corporation of doctors of medicine sponsored by a local county medical society, multi-county medical societies or a state medical association.

It is separate from the sponsoring medical society in the sense that it has its own articles of incorporation, bylaws and board of directors. But, in fact, it is an extension of the sponsoring medical society. The foundation board of directors is nominated and elected by the board of directors of the medical society, thus assuring uniformity of purpose between the two organizations.

Every physician who is a member of the sponsoring medical society . . . or eligible for membership in the society . . . may apply for membership in the foundation. And upon being accepted the member may participate in all programs and activities.

Recently, a number of foundation boards have been expanded to include representation from other providers of health services and, in some instances, consumers. Also, in some foundations membership has been enlarged to include other providers of health services, such as dentists and pharmacists, under special classes of membership.

Despite the wide variance existing in the operational modes of various foundations, all seem to generally agree upon and work toward several basic goals. First, that quality medical care be provided at an equitable cost to both patient and physician. Second, that peer review at a local level by practicing physician members of the foundation be utilized as the most efficient mechanism to insure quality care at a reasonable cost. And finally, that physicians continue in a leadership role in the administration and delivery of medical services.

It is in the methods used to reach these goals that variances occur. While it is true that every foundation has some degree of operational differences, it would seem that all foundations could be classified properly as falling into one of two main categories. They could be referred to as the *California approach* and the *Minneapolis/St. Paul approach.*

Foundations were originally formed by a number of county medical societies in California as vehicles through which the medical society could directly influence the form and quality of, as well as expenditures for, medical services in their respective communities.

Many of the legislative proposals now before Congress have played a large role in stimulating medical society interest in foundations. A number of societies are considering setting up foundations. Both on the Hill and in the Executive branch many share the AMA position that the HMO concept still has to prove itself. No

†*Presented at the KMA Interim Meeting, April 13, 1972, in Somerset*

**Assistant Executive Vice-President, American Medical Association*

one knows if the HMO will work effectively with high-risk segments of the population. No evidence exists that HMO's can hold down costs through preventive, educational and early detection measures.

To be sure $653,000 in HEW grants have gone to medical society foundations for the planning or development of HMO's. That's a lot of money! But bear in mind, the enthusiasm for HMO's in Washington is far from unbounded. And I think you are going to see a number of people besides the AMA urge a go-slow, experimental approach when hearings begin on Senator Kennedy's HMO bill in the next month or so.

There is another Washington item that you should not take for granted. This is the PSRO proposal of Senator Bennett. No matter how the final legislative language reads, assuming the Bennett amendment is passed, there will be severe funding problems. What I am saying is that there is very decidedly room for continued private efforts to develop peer review mechanisms. A federally financed and sponsored PSRO program is a long, long way from being a total reality. It must be noted, however, that six foundations have received approximately $538,000 in grants for fiscal 1971 from the Department of HEW to conduct experiments in medical care review activities. Again, this sounds like a lot of money. But again, let me run up warning flags for any foundation people who might relax their efforts to initiate or expand their own private peer review programs.

The need for private, independent initiative in this respect is probably more urgent now than ever. The AMA, through its "peer review organization" proposal, has recommended that any peer review program . . . which would involve agreements with a government agency . . . should provide that such an agreement would be entered into with either a state medical society or any organization designated or established by a state medical society. This would permit the society to choose the form in which it can best discharge a peer review responsibility. You should be aware of the possibility that most all foundations, including your own, might not qualify as a peer review organization under Senator Bennett's Amendment.

The portion of the Amendment which defines organizations qualified to become PSRO's contains, among other qualifications, the following: "(iv) The membership of which is voluntary and open to all doctors of medicine or osteopathy licensed to engage in the practice of medicine or surgery in the area without requirement of membership in or payment of dues to any organized medical society or association," and "(v) which does not restrict the eligibility of any member for service as an officer of the PSRO or eligibility for an assignment to duties of the PSRO."

Should this language be adopted and implemented by regulations, it appears to us foundations as now constituted could not be designed as PSRO's. While this would be entirely contrary to the public announcements made by Senator Bennett in endorsing the foundation concept . . . the language is in his amendment and I feel obligated to call your attention to that fact.

Many people knowledgeable on this subject, including spokesmen for the American Association of Foundations for Medical Care, have said that in spite of this language, they are confident that if the Amendment is adopted, the resulting regulations will enable foundations as now constituted to be designated as PSRO'S.

However that matter is resolved, the AMA does recognize the peer review efforts which have been incorporated into every foundation program. And it commends these organizations for the advances they have made toward implementing this activity. Also, if you agree with the generalization that there are many features of "private practice" . . . which are essential to preserve in their present or a modified form . . . it would seem to follow that aggressive, informed activity by all of you will be necessary.

In closing I must emphasize that we do not hold out the foundation as a panacea for all problems of utilization and cost control. Although foundations are increasing rapidly in number, there is no historical basis for evaluating those that will be successful. Whatever success has been achieved by the first few foundations has come only through years of experimentation and re-evaluation.

The Foundation for Medical Care concept, through your medical association, appears to us as one vehicle that may crystallize these efforts. Thank you.



"Naked Between The Covers"

I looked at her and she just lay there all alone . . . naked between the covers.

This could happen, but I hope it never will, to our scientific publication, *The Journal* of the Kentucky Medical Association. *The Journal* has provided for many years, and continues to be, our main source of news items regarding State activities and personalities in the field of medicine. It is a fertile field for the offering of scientific knowledge, which is its primary role, and in addition is an available outlet for the younger physician as he embarks into the area of authoring scientific papers.

More important than ever, today it brings us current information on socio-economic matters, an accelerating force in the world of medicine. It serves as the string around our finger to remind us of many postgraduate opportunities—at home, regionally, nationally and internationally.

Continuing education is also provided through the medium of advertising. Monthly you have the opportunity to quickly review details relating to new drugs, surgical instruments, diagnostic tools, etc. The significance of the reminder of "old faithfuls" should not be overlooked. Indeed, the benefit possibilities to be reaped from *The Journal* are unlimited.

A rewarding by-product of our advertisers is the financial resources they make available to us. Without it we would be unable to print and mail *The Journal*. It would seem appropriate, impressive and desirable, therefore, if each physician receiving this issue of *The Journal* would take the time to drop a short note to our advertisers expressing to them the appreciation we may have kept to ourselves too long.

Should the day come when those who advertise in *The Journal* feel that the physician population has lost interest in their "education through advertising" efforts, they may well cease to publish information in *The Journal,* which would abruptly halt our sources of revenue for publication; and then is when we might see her—*The KMA Journal*—lying there naked between the covers. Let's hope that day never arrives.

If you read this only because of its title, then it has served its purpose. Support your *Journal* and recognize those who make its publication possible. You are the only reason that hours of editorial and staff work have been put into its production and distribution.

HENRY B. ASMAN, M.D.

ORGANIZATION SECTION

Hospital Accreditation Workshop Co-Sponsored By KMA, Nov. 4-5

The Kentucky Medical Association and the Kentucky Hospital Association will co-sponsor a Joint Commission on Accreditation of Hospitals Workshop with the Tennessee Medical and Hospital Associations. The meeting will be held on November 4-5 in Gatlinburg, Tennessee.

The purpose of the workshop is to advise key medical staff, administration and hospital board personnel in ways to conduct and document an internal quality assurance program that will, by conforming to the Standards of the Joint Commission, qualify a hospital to become, or to remain, accredited and at the same time satisfy the broad policy demands of the public.

Each hospital that wishes to participate must be represented at the institute by at least the chief executive officer, the president or chief of staff and or other members of the medical staff. Trustee representation is strongly recommended and encouraged.

Registration fee will be $65.00 and includes all workshop materials, coffee breaks, lunch and social hour, but does *not* include lodging which will be at Riverside Motor Lodge at Gatlinburg. Lodging for Friday and Saturday night, the 3rd and 4th respectively, can be anticipated. Official brochures concerning the institute are being mailed to all hospitals in the State.

Medical Licensure Bd. Holds First Mtg. At KMA Office

The recently appointed State Board of Medical Licensure held its first meeting on September 14, 1972 in the KMA Headquarters Building, Louisville.

One of the first orders of business of the new Board was the election of officers. William P. McElwain, M. D., Commissioner of the Department of Health, was elected President for a one-year term. John C. Quertermous, M. D. Murray, Immediate Past President of KMA, was elected Vice President; and Frank M. Gaines, M. D., Louisville, was elected Secretary. Other members of the new Board of Licensure are: Royce E. Dawson, M. D., Owensboro; Booker T. Holmes, M. D., Frankfort; Gerard A. Weigel, M. D., Somerset; Thomas C. McDaniel, D.O., Erlanger; William Jordan, M. D. and Douglas Haynes, M. D., Deans of the School of Medicine of U of K and U of L respectively, are ex-officio non-voting members of this Board and were also present.

Within a week of their appointment by the Honorable Wendell H. Ford, Governor of Kentucky, there was 100% attendance at the Board meeting. This newly appointed Board of Medical Licensure covered a wide-ranging series of topics and took care of a considerable amount of necessary business in this first meeting following the move of the Division of Medical Licensure to the KMA Headquarters Office, which was completed on September 1, 1972.

National AMA Sports Meeting To Feature Dr. W. Keller

William K. Keller, M.D. Louisville, will be a featured speaker at the 14th National Conference on the Medical Aspects of Sports to be held November 26 in Cincinnati. Held annually in conjunction with the AMA Clinical Convention, the Conference will cover a wide range of subjects of interest to those serving high school and college athletic programs.

Doctor Keller, Chairman of the AMA Committee on the Medical Aspects of Automotive Safety, is the assisting physician at the Indianapolis 500, which will be his topic of discussion.

Included on the program will be forums relating to epileptics in contact sports, sports equipment, the family physician's role in sports medicine, drugs in sports and the Olympics in retrospect.

Annual Yandell Lecture Given October 30

Erle E. Peacock, Jr., M.D., Professor and Chairman of Surgery at the University of Arizona College of Medicine, will deliver the 20th Annual David W. Yandell Lecture at 11 a.m., October 30, in the Health Sciences Center Auditorium, University of Louisville School of Medicine.

Speaking on "Biological Control of Scar Tissue," Doctor Peacock will also address the Louisville Surgical Society and take part in several conferences and seminars at U of L.

All physicians and medical students are invited to attend the lecture and conferences.

Important Phone Number

The Kentucky State Board of Medical Licensure, which is now located at the KMA Headquarters Building, 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205, reports the following phone number: 456-2220

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Each capsule contains 50 mg. of Dyrenium®
(brand of triamterene) and 25 mg. of hydrochlorothiazide.

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Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

***Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

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IN EDEMA*—IN HYPERTENSION*

If you've seen one, have you really seen them all?

The following patient profiles represent typical clinical situations, but do not necessarily represent actual cases.

Age 22, previously normal mens with occasional menorrhagia. N on a sequential O.C. for four mo Complains of heavy flow, occasional intracyclic bleeding, edema, tender swollen breasts.

Indicates estrogen excess.

1st choice: Switch to a combination 50-mcg.-estrogen O.C. (such as **Demulen**®).

Age 19, small breasts, minor hirsutism, oily hair and skin. History of metrorrhagia, skipped or scanty menses. New user.

Indicates androgenic excess or estrogen deficiency (fertility is suspect).

1st choice: An estrogen-dominant O.C. (such as **Enovid-E**®).

Age 25, average frame, poor complexion. No problem with menses, normal para 1. On a low-estrogen/high-progestogen O.C. for two years. Now complains of scanty flow, decreased libido, depression.

Indicates probable buildup of progestogen-related side effects.

1st choice: Switch to a center-spectrum O.C. with more estrogen, less progestational activity (such as **Ovulen**®).

Age 21, short, mammose, with normal menses, some acne. Was put on prenuptial regimen of 50-mcg.-estrogen/moderate-progestogen O.C. for two months. Now has increased acne.

Indicates metabolic production of androgen or relative estrogen deficiency.

1st choice: Switch to a 100-mcg.-estrogen combination (such as **Enovid-E**® or a sequential).



Unmasked, physiologically and anatomically, they're not all the same. A basic difference lies in their hormone profiles. One may secrete too much estrogen, another not enough...or perhaps too much androgen; the vast majority would fit somewhere into the broad center spectrum.

Although the profiles described below may not be completely predictive, in optimal O.C. selection, the estrogen-progestogen activity ratio should be carefully matched to the patient profile. Searle offers you O.C.s in a range not only suitable for your patients in the balanced center spectrum, but also adaptable to the patient with another type of hormone profile.

Oral contraceptives are complex medications. Among the commonly reported adverse reactions are: intracycle bleeding, fluid retention, tender or swollen breasts, exacerbation of acne condition, changes in libido, amenorrhea while on medication and upon discontinuance, nausea, leg cramps, headaches, weight gain. Therefore, after reference to the prescribing information, oral contraceptives should be prescribed with care.

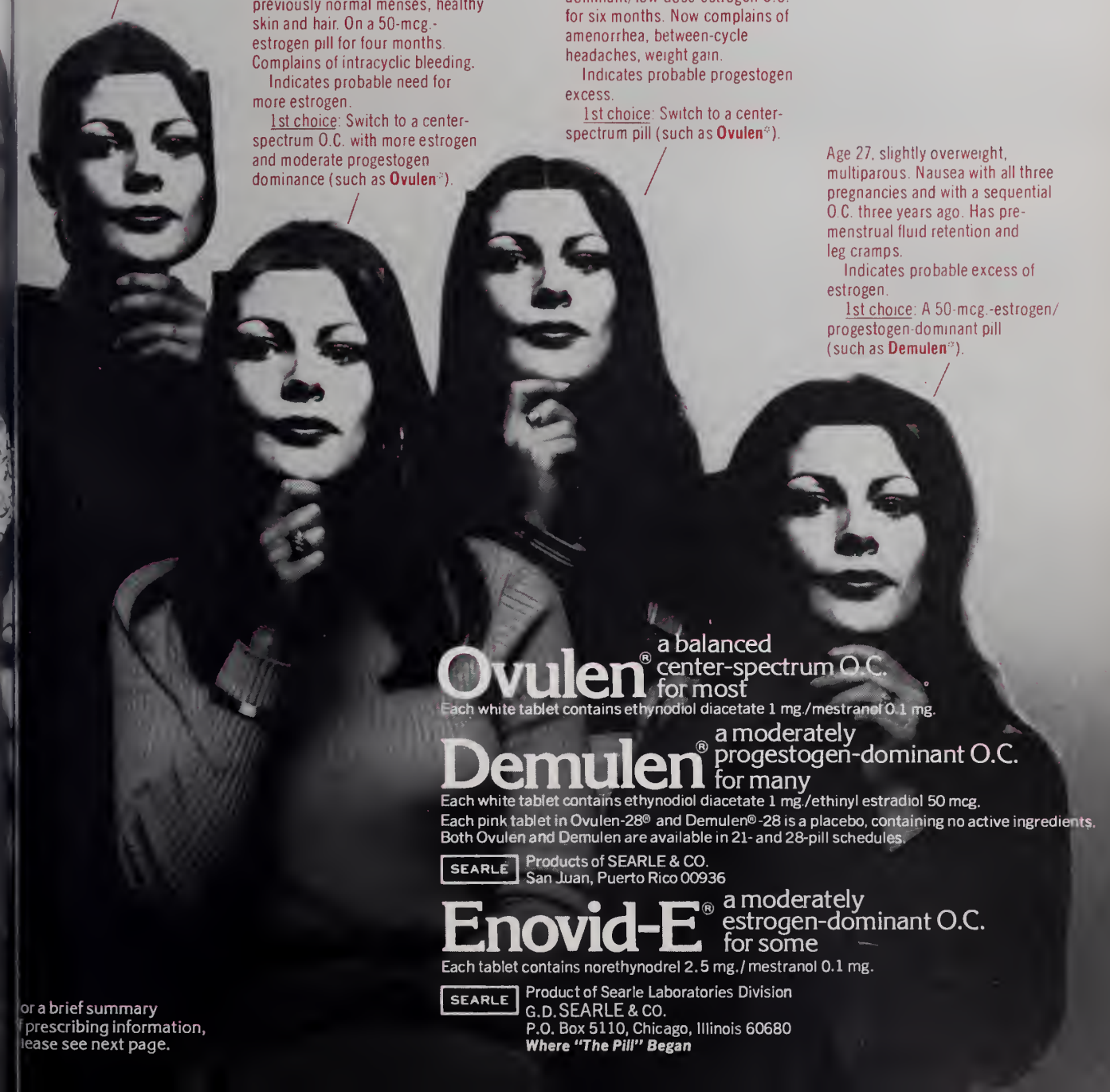
*Note: In some patients any level of exogenous estrogen or progestogen may produce symptoms of excess hormone activity.

Age 25, tall, slender, athletic, with flat chest. On a progestogen-dominant 50-mcg.-estrogen O.C. Has recurrent trichomoniasis and Monilia.
Indicates estrogen deficiency and excess of progestogen in current O.C.
1st choice: Switch to a combination pill with 100 mcg. estrogen and less progestational activity (such as **Enovid-E**® or **Ovulen**® or a sequential).

Age 23, "Miss America" figure, previously normal menses, healthy skin and hair. On a 50-mcg.-estrogen pill for four months. Complains of intracyclic bleeding.
Indicates probable need for more estrogen.
1st choice: Switch to a center-spectrum O.C. with more estrogen and moderate progestogen dominance (such as **Ovulen**®).

Age 21, college senior, average build. On highly progestogen-dominant/low-dose-estrogen O.C. for six months. Now complains of amenorrhea, between-cycle headaches, weight gain.
Indicates probable progestogen excess.
1st choice: Switch to a center-spectrum pill (such as **Ovulen**®).

Age 27, slightly overweight, multiparous. Nausea with all three pregnancies and with a sequential O.C. three years ago. Has premenstrual fluid retention and leg cramps.
Indicates probable excess of estrogen.
1st choice: A 50-mcg.-estrogen/progestogen-dominant pill (such as **Demulen**®).



Ovulen® a balanced center-spectrum O.C. for most
Each white tablet contains ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen® a moderately progestogen-dominant O.C. for many
Each white tablet contains ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.
Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.
Both Ovulen and Demulen are available in 21- and 28-pill schedules.

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Enovid-E® a moderately estrogen-dominant O.C. for some
Each tablet contains norethynodrel 2.5 mg./mestranol 0.1 mg.

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Where "The Pill" Began

For a brief summary of prescribing information, please see next page.

a family of O.C. products to help you match the right pill to the right patient

Ovulen®

Each white tablet contains
ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen®

Each white tablet contains
ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1,3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about sevenfold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

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Indication—Enovid-E is indicated for oral contraception.

The *Special Note, Contraindications, Warnings, Precautions* and *Adverse Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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In Memoriam

FRANKLIN JELSMA, M.D.
Louisville
1900-1972

Franklin Jelsma, M.D., 71, died on August 19 in Louisville, after suffering a heart attack. A neurosurgeon in the Louisville area for over 40 years, Doctor Jelsma was a 1925 graduate of the University of Oklahoma School of Medicine and did postgraduate training at the University of Louisville, Harvard, Mayo Clinic and in Europe.

Doctor Jelsma founded the first neurosurgical clinic at Louisville General Hospital in 1929 and had served as an assistant professor of neurosurgery at U of L where he taught for more than 25 years. He was a member of American Association of Neurological Surgery, World Medical Society, Southeastern Surgical Congress, as well as the American, Southern and Kentucky Medical Associations.

JAMES W. BRYAN, M.D.
Louisville
1902-1972

James W. Bryan, M.D., 70, a general practitioner in Louisville since 1930, died on August 23. A 1928 graduate of the University of Louisville School of Medicine, Doctor Bryan was on the staffs of several local hospitals. He was a member of the American Academy of Family Practice, the Jefferson County Medical Society, and the American and Kentucky Medical Associations.

EDWARD C. FRANK, M.D.
Louisville
1916-1972

Edward C. Frank, M.D., died August 23 at the age of 56. A Louisville psychoanalyst, Doctor Frank was executive director of the Region 8 Mental Health—Mental Retardation Board. A graduate of Wayne State Medical School and the Chicago Institute for Psychoanalysis, Doctor Frank was a psychiatric consultant to the Peace Corps and psychiatrist to the Chicago Municipal Court.

Doctor Frank was instrumental in establishing four community mental health centers in Kentucky and in obtaining for Region 8 a $1.4 million federal grant for its drug abuse program. A Fellow of the American Psychiatric Association, Doctor Frank also belonged to the Jefferson County Medical Society and the Kentucky Medical Association.

1972 Annual Meeting Details
To Appear In November Issue



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October 13-14

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FRIDAY, OCTOBER 13

12 noon-6:30 p.m. REGISTRATION

1:00 p.m. SCIENTIFIC SESSION I
Moderator: Ellen M. Buchart, B.S.N
"Alkalosis, Acidosis and Arrhythmia"
Thomas M. Jarboe, M.D.
Internal Medicine — Pulmonary Diseases
Lexington

1:30 p.m. "Tubes"
Lester R. Bryant, M.D.
Professor of Surgery
University of Kentucky Medical Center

2:00 p.m. "Infection"
Donna Dettlinger, R.N.
Infectious Control Nurse
Louisville General Hospital

2:30 p.m. Coffee Break

3:00 p.m. "Complications ICU: Psychosis, Oxygen Toxicity, Stress Ulcers and Mechanical Ventilation"
William H. Anderson, M.D.
Professor of Medicine
University of Louisville School of Medicine

3:30 p.m. "Organization of Intensive Care Unit"
Richard A. Krumholz, M.D., Director
Institute of Respiratory Diseases
Clinical Division, Kettering Medical Center
Kettering, Ohio

4:15 p.m. "Case Presentation"
Judah L. Skolnick, M.D.
Pulmonary Disease Department
Louisville General Hospital

Panel: William H. Anderson, M.D.
Lester R. Bryant, M.D.
Donna Dettlinger, R.N.
Thomas M. Jarboe, M.D.
Richard A. Krumholz, M.D.

SATURDAY, OCTOBER 14

8:00 a.m.-2:00 p.m. REGISTRATION

8:30 a.m SCIENTIFIC SESSION II
Moderator: Judah L. Skolnick, M.D.
"TB in Children"
H. Garrett Adams, M.D.
Assistant Professor of Pediatrics and Microbiology
University of Louisville School of Medicin

9:15 a.m. "Organization of Intensive Care Unit"
Richard A. Krumholz, M.D., Director
Institute of Respiratory Diseases
Clinical Division, Kettering Medical Cente
Kettering, Ohio

10:15 a.m. "Skin Testing"
Phyllis Q. Edwards
Tuberculosis Program
National Center for Disease Control
Atlanta, Georgia

10:45 a.m. Coffee and Roll Break

11:15 a.m. "Allergic Alveolitis and Toxic Inhalants"
Yen-Jen-Fuh, M.D.
Associate Professor of Medicine
University of Kentucky Medical Center

12:00 noon "Stump the Experts—Case Presentations"

Panel: J. T. Ling, M.D., Radiologist
Louisville General Hospital
Richard B. McElvein, M.D.
Thoracic Surgeon, Lexington
Robert W. Penman, M.D.
Associate Professor of Medicine
University of Kentucky Medical Center

KENTUCKY THORACIC SOCIETY · 1954 ·

NOTE: All health professionals are invited to both sessions

Scientific Session I—October 13 is primarily for paramedical personnel

Scientific Session II—October 14 is primarily for physicians

Letter To The Editor

Dear Editor:

From recent publicity concerning the Tuskegee Study of Untreated Syphilis one might get the impression that the work was secret and hidden from the scientific world by the U.S. Public Health Service.

As a retired Service officer, I think physicians should know this is not correct. There follows a list of references to articles on this Study, published periodically from 1936 to present, in well-known medical journals.

Charles F. Blankenship, M.D.
Professor and Acting Chairman
Department of Community Health
University of Louisville

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2. Vonderlehr, R. A. et al: Untreated Syphilis in Male Negro, *J Vener Dis Inform* 17: 260-265, 1936.
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13. Rosahn, P. D.: Autopsy Studies in Syphilis, *J Vener Dis Inform* (suppl. 21) 28: 1-67, 1947.
14. Caldwell, J. G., Price, E. V., Schroeter, A. K., and Fletcher, G. F., Aortic Regurgitation in a Study of Aged Males with Previous Syphilis, in press.
15. Rosahn, P. D.: The Adverse Influence of Syphilitic Infection on the Longevity of Mice and Men, *Arch of Derm and Syph* 66: 547-568, 1952.
16. Usilton, L. J. and Miner, J. R.: A Tentative Death Curve for Acquired Syphilis in White and Colored Males in the United States, *J Vener Dis Inform* 18: 231, 1937.

Mr. McConnell On BC Board

J. Ed McConnell, President of Kentucky Blue Cross and Blue Shield and Delta Dental Plan of Kentucky, has been elected to the Blue Cross Association Board of Governors. Mr. McConnell also serves on the Board of Directors of the National Association of Blue Shield Plans and is one of only two Plan Presidents elected to both Boards.



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18 Medical lecture, "Immunology", 6:30 p.m., Jewish Hospital, Louisville

20-22 Scientific Seminar, Kentucky Chapter, American Academy of Family Physicians. (Acceptable for 7½ hours of prescribed credit by AAFP.) Park Mammoth Resort, Park City

23 Postgraduate course, "Successes and Failures of Radiodiagnosis," 1-5 p.m., University of Louisville Health Sciences Center, Louisville

27 Postgraduate course, "Nuclear Medicine in Everyday Medical Practice," 8 a.m.-5:15 p.m., Holiday Inn Rivermont, Louisville

NOVEMBER

2-3 Sixth Annual Newborn Symposium, "Infections in the Newborn," Department of Pediatrics, University of Louisville, Health Sciences Center Auditorium, Louisville

DECEMBER

15-16 Postgraduate course, "Pediatric Ophthalmology," Jonathan Wirtschafter, M.D., Program Chairman, University of Kentucky Medical Center. Fee: $75 for practitioner and $10 for resident. Further information:
Frank R. Lemon, M.D., Associate Dean for Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506

IN SURROUNDING STATES

OCTOBER

23-26 Annual meeting, American College of Chest Physicians, Denver Convention Center, Denver

24-26 National Conference of State Medical Association Representatives on Continuing Medical Education, Ambassador Hotel, Chicago

27-28 Tennessee-Kentucky Regional Meeting, American College of Physicians, Sheraton Motor Inn, Memphis

NOVEMBER

10 Postgraduate course, "Clean Air Symposium," Cleveland Clinic, Cleveland

13-16 Annual meeting, Southern Medical Association, New Orleans

15-16 Postgraduate course, "Gastroenterology: Current Topics," Cleveland Clinic, Cleveland

26 14th National Conference on the Medical Aspect of Sports, Cincinnati

26-29 Clinical Convention, American Medical Association, Cincinnati

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Contraindications: History of hypersensitivity to thiabendazole.
Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.
Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction, patients should be carefully monitored.
Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live Ascaris in the mouth and nose. Hypersensitivity reactions

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Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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addendum

INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.
The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).
MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.
The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

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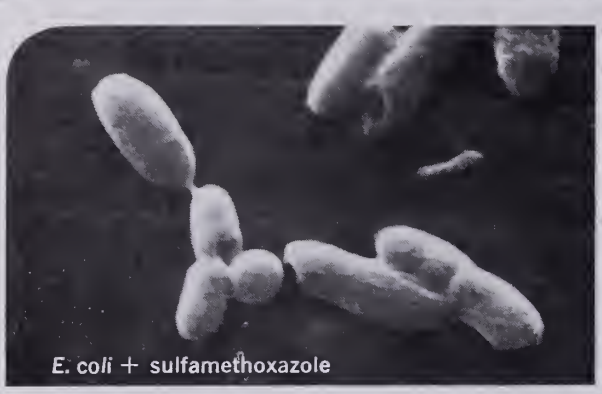
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Encounter under the Scanning Electron Microscope



SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.









Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,[1-3] strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."[2]

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

References: 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. **2.** Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother., 1*:164, 1972. **3.** Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A be hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of su infections. Deaths from hypersensitivity reactions, agranulocy sis, aplastic anemia and other blood dyscrasias have been r ported and early clinical signs (sore throat, fever, pallor, purpu or jaundice) may indicate serious blood disorders. Frequent CB and urinalysis with microscopic examination are recommend during sulfonamide therapy. Insufficient data on children und six with chronic renal disease.

Precautions: Use cautiously in patients with impaired rer or hepatic function, severe allergy, bronchial asthma; in glucos 6-phosphate dehydrogenase-deficient individuals in whom dos related hemolysis may occur. Maintain adequate fluid intake prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytos

Encounter in Clinical Practice

Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms often implicated in acute nonobstructed pyelonephritis and cystitis.

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B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often respond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

In nonobstructed cystitis and pyelonephritis due to susceptible organisms

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Basic Therapy

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plastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

American Medical Association
26th Ciinicai Convention
Cincinnati, Ohio
November 26-29, 1972

an exciting convention in an unconventional city



The Scientific Program — The door to a rich learning experience

Are you as up-to-date in your specialty as you'd like to be? Here's your chance to close the gap and gain continuing education credit besides. Begin with a 3-day total immersion course. Follow up with stimulating conferences, roundtable discussions, the latest medical films, and 250 scientific and industrial exhibits.

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Dr. Albert Sabin researched the polio vaccine at Children's Hospital. The Medical Laser Laboratory pioneered in using lasers for surgery and dermatology. If you'd like to visit these — the Shriners Burns Institute — or any of the hospitals, labs and research facilities around Cincinnati, the AMA Information/ Entertainment Center will be happy to help you arrange it.

Iron therapy for anemia is almost as old as history itself



Celsus's empirical use of iron

Aulus Cornelius Celsus recommended an unusual form of iron therapy for the treatment of enlarged spleens—the oral administration of water that blacksmiths had used for dousing white-hot iron.

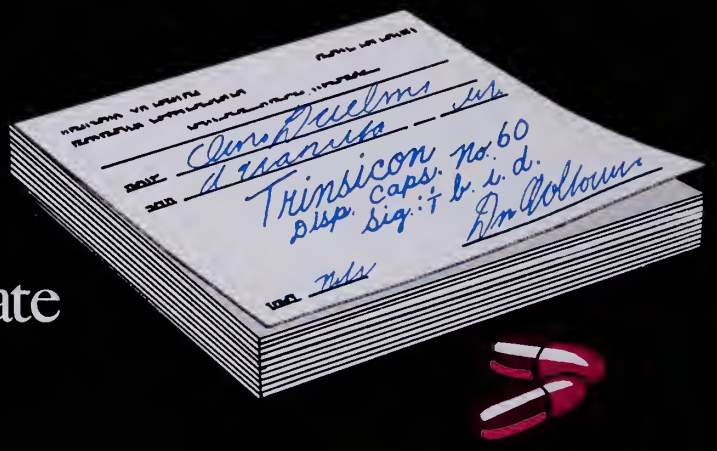
For more modern anemia therapy

Trinsicon®

Hematinic Concentrate with Intrinsic Factor

(See reverse side for prescribing information.)

Trinsicon®
Hematinic Concentrate with Intrinsic Factor



Description: Each Pulvule® contains—

Special Liver-Stomach Concentrate, Lilly (containing Intrinsic Factor)	240 mg.
Cobalamin Concentrate, N.F., equivalent to Cobalamin	7.5 mcg.
(The total vitamin B_{12} activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)	
Iron, Elemental (as Ferrous Fumarate)	110 mg.
Ascorbic Acid (Vitamin C)	75 mg.
Folic Acid	0.5 mg.

Indications: Trinsicon is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia. Therapeutic quantities of hematopoietic factors that are known to be important are present in the recommended daily dose.

Vitamin B_{12} with Intrinsic Factor—When secretion of intrinsic factor in gastric juice is inadequate or absent (e.g., in Addisonian pernicious anemia or after gastrectomy), vitamin B_{12} in physiological doses is absorbed poorly, if at all. The resulting deficiency of vitamin B_{12} leads to the clinical manifestations of pernicious anemia. Similar megaloblastic anemias may develop in fish tapeworm (*Diphyllobothrium latum*) infection or after a surgically created small-bowel blind loop; in these situations, treatment requires freeing the host of the parasites or bacteria which appear to compete for the available vitamin B_{12}. Strict vegetarianism and malabsorption syndromes may also lead to vitamin B_{12} deficiency. In the latter case, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary for adequate treatment of the patient.

Potency of intrinsic factor concentrates is determined physiologically, i.e., by their use in patients with pernicious anemia. The liver-stomach concentrate with intrinsic factor and the vitamin B_{12} contained in two Pulvules Trinsicon provide 1½ times the minimum amount of therapeutic agent which, when given daily in an uncomplicated case of pernicious anemia, will produce a satisfactory reticulocyte response and relief of anemia and symptoms.

Concentrates of intrinsic factor derived from hog gastric, pyloric, and duodenal mucosa have been used successfully in patients who lack intrinsic factor. For example, Fouts *et al.* maintained patients with pernicious anemia in clinical remission with oral therapy (liver extracts or intrinsic factor concentrate with vitamin B_{12}) for as long as twenty-nine years.

After total gastrectomy, Ficarra found multifactor preparations taken orally to be "just as effective in maintaining blood levels as any medication that has to be administered parenterally." His study was based on twenty-four patients who had survived for five years after total gastrectomy for cancer and who had been taking two Pulvules Trinsicon daily.

Folic Acid—Folic acid deficiency is the immediate cause of most, if not all, cases of nutritional megaloblastic anemia and of the megaloblastic anemias of pregnancy and infancy; usually, it is also at least partially responsible for the megaloblastic anemias of malabsorption syndromes, e.g., tropical and nontropical sprue.

It is apparent that in vitamin B_{12} deficiency (e.g., pernicious anemia), lack of this vitamin results in impaired utilization of folic acid. There are other evidences of the close folic acid-vitamin B_{12} interrelationship: (1) B_{12} influences the storage, absorption, and utilization of folic acid, and (2), as a deficiency of B_{12} progresses, the requirement for folic acid increases. However, folic acid does not change the requirement for vitamin B_{12}.

Iron—A very common anemia is that due to iron deficiency. In most cases, the response to iron salts is prompt, safe, and predictable. Within limits, the response is quicker and more certain to large doses of iron than to small doses.

Each Pulvule Trinsicon furnishes 110 mg. of elemental iron (as ferrous fumarate) to provide a maximum response.

Ascorbic Acid—Vitamin C plays a role in anemia therapy. It augments the conversion of folic acid to its active form, folinic acid. In addition, ascorbic acid promotes the reduction of ferric iron in food to the more readily absorbed ferrous form. Severe and prolonged vitamin C deficiency is associated with an anemia which is usually hypochromic but occasionally megaloblastic in type.

Contraindications and Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

Folic acid *alone* is unwarranted in the treatment of pure vitamin-B_{12}-deficiency states, such as pernicious anemia. Indeed, the use nf folic acid in large doses in pernicious anemia without adequate vitamin B_{12} may result in hematologic remission but neurological progression.

As with all preparations containing intrinsic factor, resistance may develop in some cases of pernicious anemia to the potentiation of absorption of physiological doses of vitamin B_{12}. If resistance occurs, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary for adequate treatment of the patient. No single regimen fits all cases, and the status of the patient observed in follow-up is the final criterion for adequacy of therapy. Periodic clinical and laboratory studies are considered essential and are recommended.

In extremely rare instances, skin rash suggesting allergy has been noted following the oral administration of liver-stomach material. Allergic sensitization has been reported following both oral and parenteral administration of folic acid.

Hemochromatosis and hemosiderosis are contraindications to iron therapy.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastrointestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects in the iron-sensitive patient.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500 and in Identi-Dose® (unit dose medication, Lilly) in boxes of 100. [090971]

Trinsicon®
Hematinic Concentrate with Intrinsic Factor
A Comprehensive Hematinic

Additional information available to the profession on request.

Eli Lilly and Company
Indianapolis, Indiana 46206

Lilly

201378



"For generations my family has insisted on Donnagel®-PG," says active young matron Mrs. T. Farnsworth Lipp (of the Upper Lipps), shown here with her charming son. "All the benefits of paregoric—without the unpleasant taste, don't you know? And Junior thinks Donnagel-PG tastes so much like bananas that I never worry about a slip between spoon and Lipp."

A Matter of Taste

With or without a silver spoon, a most tasteful solution in treating acute, non-specific
neas: all the benefits of paregoric, without the unpleasant taste. Donnagel®-PG treats
mpanying cramping, tenesmus, and nausea as well as the diarrhea itself. Instead of
asant-tasting paregoric, it contains the therapeutic equivalent, powdered opium,
omote the production of formed stools and lessen the urge. And it provides the
lcent-detoxicant effects of kaolin and pectin, plus the antispasmodic benefits of
donna alkaloids. And a good banana flavor to baby any taste.



Donnagel®-PG

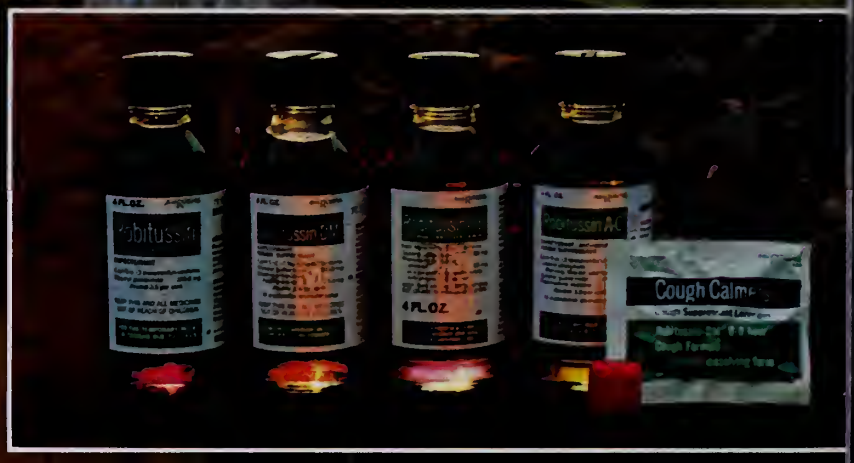
Donnagel with paregoric equivalent

℞ Available on oral prescription or without prescription under limited circumstances as modified by applicable state law.

ach 30 cc. contains: Kaolin, 6.0 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.;
ine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Powdered opium, USP, 24.0 mg.
alent to paregoric 6 ml.) (Warning: may be habit forming); Sodium benzoate (preservative),
g.; Alcohol, 5%. A.H. Robins Company, Richmond, Virginia 23220

A·H·ROBINS

coughs are back...



clear the tract!

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

Robitussin®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100.0 mg.
Alcohol, 3.5%

For unproductive allergic coughs

Robitussin A-C® C

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100.0 mg.
Pheniramine maleate ..... 7.5 mg.
Codeine phosphate ..... 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

Robitussin-DM®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100.0 mg.
Dextromethorphan hydrobromide ..... 15.0 mg.
Alcohol, 1.4%

Clears sinuses and nasal stuffiness as it relieves cough

Robitussin-PE®

Each 5 cc. contains:
Glyceryl guaiacolate ..... 100.0 mg.
Phenylephrine hydrochloride ..... 10.0 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

Cough Calmers®

Each Cough Calmer contains:
Glyceryl guaiacolate ..... 50.0 mg.
Dextromethorphan hydrobromide ..... 7.5 mg.

with the ROBITUSSIN® LINE

Select the Robitussin® "Clear-Tract" Formulation That Treats Your Patient's Individual Coughing Needs:

All 5 Robitussins have an EXPECTORANT-DEMULCENT action. Keep this handy chart as a guide in selecting the formula that provides the *extra* benefits you want for your patient.

Robitussin® extra benefit chart	Cough Suppressant	Antihistamine	Long-Acting (6-8 hours)	Nasal, Sinus Decongestant	Non-Narcotic
ROBITUSSIN®					●
ROBITUSSIN A-C®	●	●			
ROBITUSSIN-DM®	●		●		●
ROBITUSSIN-PE®				●	●
COUGH CALMERS®	AHR		AHR		AHR

A. H. Robins Company,
Richmond, Virginia 23220

A·H·ROBINS



When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections. In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomyci hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in nc less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

nfections caused by susceptible strains f pneumococci, streptococci, and taphylococci, including penicillin-esistant strains. Staphylococcal strains esistant to Lincocin (lincomycin ydrochloride, Upjohn) have been ecovered. Before initiating therapy, ulture and susceptibility studies should e performed. Lincocin has proved aluable in treating patients hyper-ensitive to penicillin or cephalosporins, nce Lincocin does not share ntigenicity with these compounds. lowever, hypersensitivity reactions ave been reported, some of these in atients known to be sensitive to enicillin.

Vell tolerated at infusion site: Lincocin ntravenous infusions have not roduced local irritation or phlebitis, hen given as recommended. Lincocin usually well tolerated in patients who e hypersensitive to other drugs. evertheless, Lincocin should be used utiously in patients with asthma or gnificant allergies.

patients with impaired renal function, ie recommended dose of Lincocin ould be reduced to 25—30% of e dose for patients with normal dney function. Its safety in egnant patients and in infants ss than one month of age has t been established.

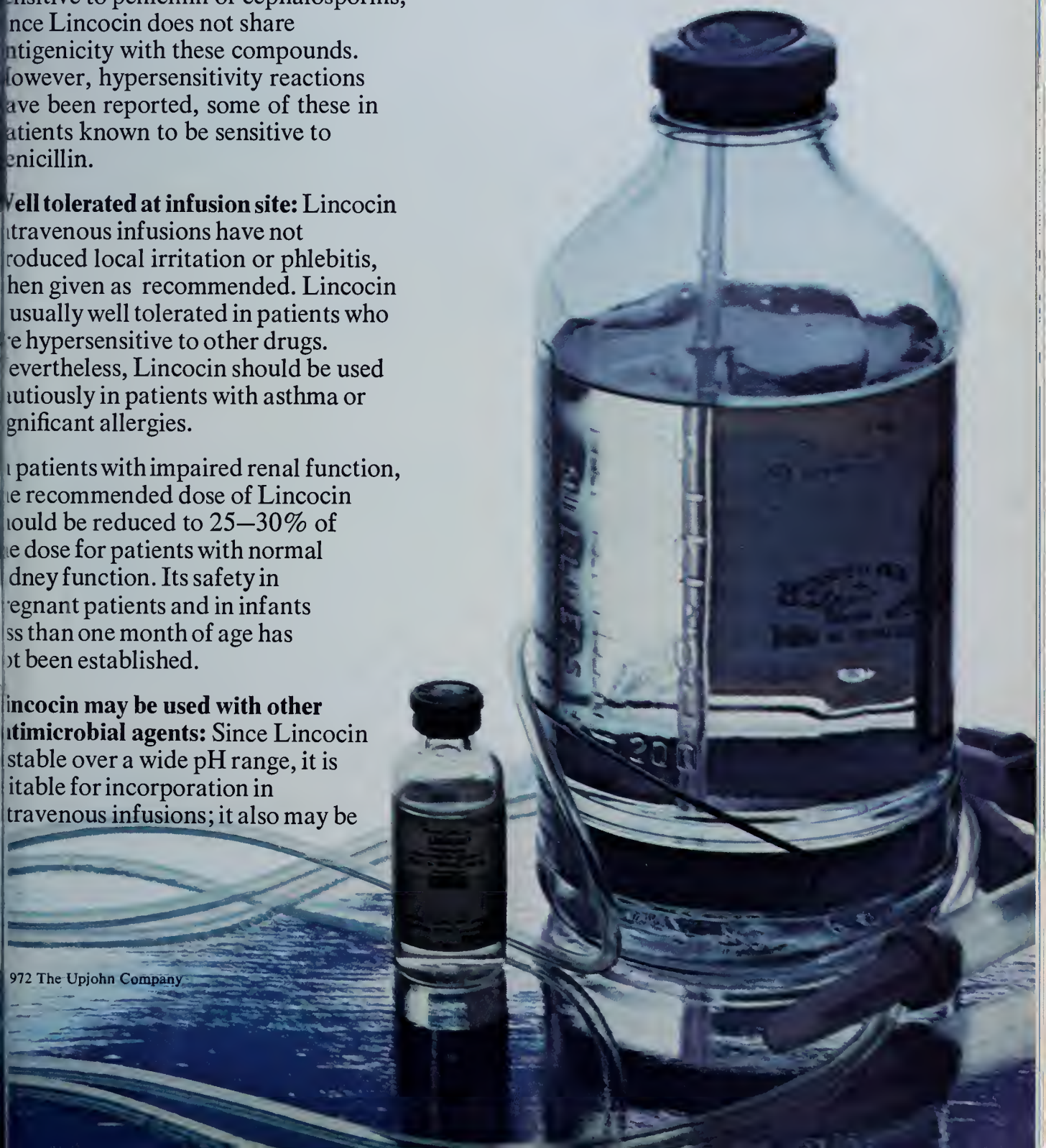
incocin may be used with other ntimicrobial agents: Since Lincocin stable over a wide pH range, it is itable for incorporation in travenous infusions; it also may be administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



972 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatme
Skin and mucous membranes—Skin ras
urticaria, vaginitis, and rare instances of
foliative and vesiculobullous dermatitis h
been reported. *Liver*—Although no direct
lationship to liver dysfunction is establish
jaundice and abnormal liver function t
(particularly serum transaminase) have b
observed in a few instances. *Cardiovasc*
—Instances of hypotension following par
teral administration have been report
particularly after too rapid IV adminis
tion. Rare instances of cardiopulmonary
rest have been reported after too rapid
administration. If 4.0 grams or more adm
istered IV, dilute in 500 ml of fluid
administer no faster than 100 ml per h
Special senses—Tinnitus and vertigo h
been reported occasionally. *Local reacti*
—Excellent local tolerance demonstrate
intramuscularly administered Linco
(lincomycin hydrochloride). Reports of p
following injection have been infrequ
Intravenous administration of Lincocin
250 to 500 ml of 5% glucose in disti
water or normal saline has produced
local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *500*
Capsules—bottles of 24 and 100. *Ste*
Solution, 300 mg per ml—2 and 10 ml v
and 2 ml syringe. *Syrup, 250 mg per 5*
—60 ml and pint bottles.

*For additional product information, con
the package insert or see your Upjo
representative.*

MED B-6-S (KZL-7) JA71-16

The Upjohn Company
Kalamazoo, Michigan 49001

Upjoh

"The history of science, and in particular the history of medicine . . . is . . . the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

– George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

Results of a questionnaire to 7,000 physicians:

62.9%
Believe combination drug products are useful.

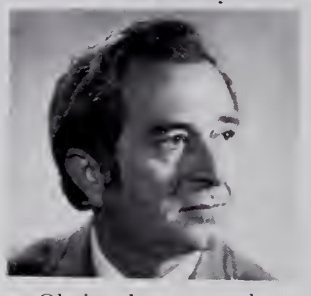
13.8%
Do not believe combination drug products are useful.

Are combination drug product useful in treatment involvin concomitant use of two or more drugs

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Ohviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, he it capsule, tablet, or liquid, is a question that can he answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatihle.

By the same token, when you prescrihe a properly tested and rational comhination, you should have less worry ahout pharmaceutical or pharmacological compatihility – and about reasonable dosage ratios as well. Compatihility of the formulation should he demonstrated in the lahoratory and clinic hefore the product is available for prescription–which is more than can usually he said for the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to he found, and for them the prefabricated comhination must be rejected. But that hardly argues for eliminating rational comhinations from the market. Think, for example, of the prohlems that would arise if the components of widely accepted comhinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescrihed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin hut forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerahle discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescrihe is a prohlem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good example of the usefulness of comhinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the comhination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But hlood pressure control was invariahly better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tahlets.

Deciding which combinations constitute rational therapy ohviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to he safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investigators and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to prescriptions that have been in use for a number of years and that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA performed quite well. I am thinking particularly of penicillin - streptomycin comhinations that patients – especially surgical patients – were given in the injection. This made much less discomfort for the patient, less demand on nurses' time, and fewer opportunities for dosage errors. To take such a preparation off the market doesn't seem to be good medicine, unless actual usage showed a great deal of harm from the injection (rather than the proper use) of the comhination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who should determine which is which? Obviously, the FDA must play a major role in reaching this determination. In fact, I don't think it can avoid taking the ultimate responsibility, hut it should enlist the help of outside physicians and experts in assessing the evidence and in making the ultimate decision.

Maker of Medicine

V. Clarke Wescoe, M.D.
President
Vinthrop Laboratories



f two medications are
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t it would be pedantic,
insist they always be
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antry, the "expert" de-
s the combination he-
se it is a fixed dosage
n. When the "expert"
okes the concept of fixed
age form he obscures
fact that single-ingre-
nt pharmaceutical prep-
tions are also fixed
age forms. By a singular
antic exercise he im-
s a pejorative meaning
the term "fixed dose"
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pect to combinations.
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est of circumstances
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t some aches and pains
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irin yet that fact does
militate against the *us-*
dose being 650 mg.
he other semantic ploy
n called into play is to
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duct as rational or irra-
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ake antibiotic mixtures,
source of much of the
cism generated against
combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antihiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should he.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, hut in many circumstances it may hest be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use hy practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climhs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to he irrefutahle. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescrihed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescrihed separately, the price of medicines to patients would jump hy $443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irrefutable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its lahel claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products suhmitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical ohservation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should he kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and hounds but rather hy small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the hest judges of efficacy because the ultimate proof of any product's effectiveness is acceptance hy physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
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The Journal of The KENTUCKY Medical Association



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The negative power of clinically significant anxiety in angina pectoris...



This man feels he is living on borrowed time.

During anginal attacks, patients may suffer intense apprehension. More frequently, however, they experience a continuing sense of less severe but nonetheless disproportionate anxiety.

Reduction of such clinically significant anxiety is important, since undue emotional stress may precipitate further anginal episodes.

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*Levine, S.: "Angina Pectoris and Emotional Overlay," Scientific Exhibit presented at the Annual Meeting of the Maine Medical Association, Kennebunkport, Me., June 13-15, 1971.

A copy of the Levine study may be obtained from your Roche representative.

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MESSAGE FROM THE PRESIDENT



IT was my pleasure to represent the Kentucky Medical Association on the Governor's Tour this year. During the course of this tour, I met and enjoyed the company of many fine people. It was well worth the time spent. Among these fine people were several individuals from relatively large industries throughout Kentucky. In the course of our discussions of mutual problems, one of the most pressing was the problem of inequities in health and accident programs. It was pointed out that absenteeism due to misrepresenting illness in order to receive health and accident benefits is one of the industry's most serious problems. It occurred to me that we physicians may be inadvertently adding to this problem by not being more careful in giving our patients excuses for missing work for medical reasons.

In retrospect, I have at times not been suspicious enough of some of my patients. I am sure I have verified a few hunting trips or shopping excursions. For this reason, I was not offended by the presentation of this problem by business. I did not get the impression these men were accusing us of collusion but rather pointing out a problem that is real.

If you agree with me that there is a possibility we are being used by thoughtless employee-patients, I urge you to initiate practices in your office to preclude your being placed in the position of being unwitting accessories to this rape of the health and accident benefits offered for our patients by industries.

Lee A. Hess, M.D.

PUBLIC HEALTH PAGE

Prescription Drug Refills†

William P. McElwain, M.D., M.P.H.
Commissioner of Health
Commonwealth of Kentucky

RECENT reports filed by agents of the Health Department's Narcotic and Drug Control Program indicate that some physicians are not yet aware of a new regulation governing the writing and refilling of prescriptions for drugs bearing a "Federal Caution" legend. Designed primarily to protect the patient against possible over-use of a medication containing a "controlled substance," the regulation requires the physician to write specific instructions concerning the number and frequency of refills. The pharmacist is required to record and initial each refilling on the back of the original prescription form.

This State Board of Health regulation, which is reproduced below, was filed with the Legislative Research Commission in March after consultation with the KMA Board of Trustees and on the direct recommendation of the Kentucky State Board of Pharmacy. It became effective April 12, 1972:

FDC-13-1
LEGEND DRUG REFILL RECORDS
KRS 217.015 et seq.
Amends: FDC-13
Pursuant to the authority of KRS 217.125

(1) No pharmacist shall refill a prescription for a drug bearing a "Federal Caution Legend" unless authorized by the prescribing practitioner. The pharmacist shall record all such refills by writing the date of the refill together with his name or initials on the back of the original prescription. The date of the refill may be stamped on the prescription if the pharmacist so desires.

(2) The use of the terms "p.r.n." (prn) and "ad. lib." in relation to authorization for refilling prescriptions shall not be used. Practitioners shall be specific in their refill authorization instructions. In no event shall any prescription be refilled beyond six months from date of issue unless otherwise specified by the practitioner.
Effective: 12 April 1972

Labeling Requirements for Prescription Drugs

A bill passed by the 1972 General Assembly (Senate Bill 205, now KRS 217.065) requires that the label on all prescription drugs sold after January 1, 1973, shall contain the name and address of the manufacturer and the name and address of the distributor. If the distributor buys drugs manufactured to his own specifications, and if he assumes full responsibility for the integrity of the product, the manufacturer's name may be omitted from the label. The distributor, however, must file a statement with the Narcotic and Drug Control Program in the Department of Health in which he accepts responsibility and gives the name and address of the manufacturer.

The deadline for filing statements of responsibility is December 13, 1972. Additional information may be obtained from the Director, Narcotic and Drug Control Program, Kentucky Department of Health, 275 East Main Street, Frankfort, Kentucky 40601. The program will also review and comment on proofs or layouts of new labels prior to their printing if this service is desired.

Child-Resistant Containers

Beginning October 24, 1972, the child-resistant containers now required for aspirin will

†*This article was prepared by: N. Earl Becknell, R.Ph., Director, Narcotic & Drug Control Program, Kentucky State Department of Health, 275 East Main Street, Frankfort, Kentucky 40601*

also be specified for all drugs under the jurisdiction of the Kentucky Controlled Substance Act of 1972. In February, 1973, this packaging requirement will apply to all prescribed oral medication unless the physician or patient specifically requests a conventional container.

Controlled Substance Act

Informational copies of the Kentucky Controlled Substance Act of 1972 are available to interested persons upon request to the Department of Health. These booklets contain the full text of the Act with KRS references plus copies of all State Board of Health regulations relating to the control of narcotics and dangerous drugs.

Governor Ford Appoints Drug Formulary Council

As a result of the passage of House Bill 427 of the 1972 Kentucky General Assembly, Governor Wendell Ford has appointed a Drug Formulary Council that will be responsible for providing a list of acceptable generic drugs to physicians, pharmacists and hospitals throughout Kentucky.

Included in the appointments were E. C. Seeley, M.D., London, for a three-year term and Kenneth Crawford, M.D., Louisville, for a two-year term. Both physicians were selected from a list of names supplied to the Governor by KMA.

Other members of the newly appointed Council are Robert L. Barnett, Jr. and Leo Nohstall, both of Louisville, appointed to four-year terms, and Joseph D. Pollock, Louisville, to a three-year term. The Legislative Research Commission appointed State Rep. Robert E. Hughes, D-Louisville, to serve at the Council's pleasure.

No date was set by the General Assembly for the Council to complete the list of generic drugs. Upon completion of the list, however, the physician will still be primarily responsible for the type of prescription given to his patient but he will have to specify on the prescription that no substitute can be given. If he fails to specify in writing "No Substitution" a pharmacist may substitute a generic drug from the list compiled by the Formulary Council.

Notes on Physicians' Fees

Physicians' fees increased 1.37% during the first nine months of the Economic Stabilization Program while the overall Consumer Price Index rose 2.05% during the same period, an AMA study disclosed today.

The Physicians' Fee Index is a component of the All Services Index of the CPI. The All Services Index rose 2.16% during the nine months from September, 1971, through May, 1972, compared to 3.03% during the previous nine months from December, 1970, through August, 1971.

During the same period, the Semi-Private Hospital Room Index (which is part of the All Services Index) increased by 3.84%, compared to 6.62% for the previous eight months.

The study of comparative rates of increase was prepared by the Center for Health Services Research and Development of the American Medical Association. It was based on recently published data from the federal government's Bureau of Labor Statistics.

The 1.37% rise in Physicians' Fees Index represents an increase of less than one-third of the 4.38% rate increase for the nine months prior to the freeze. This means that the increase in physicians' fees is well within the goal of the Health Services Industry Committee and the Price Commission to reduce the rate of inflation by one-half.

From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 39-year-old married, white, gravida 7, para 6, private patient had an EDC of 2-21-70. She was seen initially for this pregnancy on 12-4-69. Examination at that time revealed Rh+ and Hgb 13.5 gm. With her fifth delivery she had severe anemia which required 11 pints of blood. Her sixth pregnancy was uncomplicated.

She was seen in the emergency room at 1:40 p.m. on 1-18-70 complaining of indigestion of 10 days duration with some diarrhea and vomiting. Examination revealed a patient seriously ill, not jaundiced or cyanotic; her sclera appeared normal; temperature 104° orally, pulse 136, respiration 18, blood pressure 120/80. She stated she was unable to retain anything and gave no history of vomiting bright red blood or coffee ground appearing material. Her stools, while liquid, contained no blood. Her abdomen appeared quite distended with gas, with no evidence of free fluid or blood. The infant was active. Vaginal examination revealed the cervix long and thick 2 cm. dilated, cephalic presentation, with the head not engaged. Her hemoglobin was 6.9 gm, 18% hematocrit, WBC 2, 150, 38 segs, 35 stab, 14 lymph. The admitting diagnosis was severe anemia of undetermined etiology, pregnancy 8 months, fever of undetermined origin. Two pints of blood were given, chest x-ray was reported normal; heart and chest normal. Bilirubin direct 1.03, indirect 1.22 with total 2.25, selectogen test was negative, platelet count 45,000. Prothrombin time control 13.0, patient 19.8, pH 7.5, PCO_2 27 mm, Chlorides 100 meq, potassium 3.6 meq, Na 138 meq, BUN 24.5 mg%, Hgb. 7.7 gm 50%, WBC 2,500. Another pint of blood was given and the count rose to 8.5 gm, WBC remained low 2,450, the stool was positive for occult blood. A gastric analysis showed 16.5° total acidity with no free Hcl. SGPT was 56 units.

A bone marrow was performed; the pathologist's impression was pernicious anemia; leukemia couldn't be excluded. A hematologist was consulted by phone who felt the hematological findings were associated with the pregnancy. An obstetrician was consulted by phone (long distance) and he felt this was probably pernicious anemia of pregnancy with hemorrhage and advised evacuation of the uterus if the patient's condition would tolerate induction. X-ray of abdomen revealed an 8 month gestation.

On 1-20-70, six more pints of blood were ordered. She was receiving nasal O_2, was digitalized, and had constant Levine suction. She continued to have tarry stools. On 1-22-70 her membranes were artificially ruptured and she delivered a living 5 lb. 8 oz. male. The placenta was expressed manually. She had normal uterine bleeding, but lost a considerable amount of blood from vaginal laceration she sustained at a precipitous delivery. She received Darvon-65 for pain. The Levine tube was removed. X-ray impression of abdomen compared with films of 1-22-70 was small bowel obstruction, with associated air fluid levels seen. The Levine tube was reinserted. Repeat x-ray on 1-25-70 revealed a small bowel obstruction without change. She was being followed by a general surgeon and maintained on IV fluids. On 1-25-70 she developed a WBC of 28,000 with 91% polys. This was repeated and rose to 30,000 with 88% polys. Hgb was 8.2 gms and two pints of blood had been given. The patient was surgically explored and a volvulus of the sigmoid colon was found. A decompressive colostomy was performed plus bilateral tubal ligation. Multiple transfusions were required.

On 1-29-70 the Hgb was 5.5 gms and she received six units of blood during the next 12 hours. Her fluids and electrolyte patterns were carefully managed. Her urine output remained good. During the 29th and 30th she was receiving two pints of blood simultaneously. Her blood pressure was barely maintained. It was obvious that the patient couldn't continue to endure without finding the source of bleeding. The abdomen was reopened on 1-30-70 and by exploration and making an incision in the antral portion of the stomach, three or four large areas of ulceration were found which represented peptic ulceration. A Bilroth gastroduodenostomy and vagotomy were performed. The patient withstood the procedure and seemed improved. Her Hgb was 13.2 gm. She received four pints of blood in surgery. In all, she had 30 pints of blood. A recheck of electrolytes showed good balance on the morning of the 30th, however, later that day, six or eight hours postoperatively, the patient again began to fail. She went into shock; vasopressors were administered.

In spite of Mannitol she had no urinary output. She expired 6:30 a.m., 1-31-70. No autopsy was obtained. The cause of death was:

1. Pernicious anemia of pregnancy
2. Volvulus, Sigmoid colon
3. Acute gastritis and gastric ulceration

Comment

This death was classified as an indirect obstetrical death with possible preventable factors. With the advantage of hindsight this complex case could certainly have been better managed in a large hospital with complete diagnostic and consultative facilities. When the marked anemia was detected, especially

with the knowledge of her previous history, thorough study was indicated.

The Committee felt the aspirin in the Darvon compound could have aggravated the GI bleeding. It is considered very difficult for any physician to make intelligent judgements in this case without actually being present and with the knowledge given us, particularly since no autopsy was performed. This patient was certainly a high risk patient that needed intense medical and obstetrical care.

It should be added that intestinal obstruction at any time is a lethal disease, particularly during pregnancy, for the diagnosis is often delayed. The longer the delay in treatment the greater the mortality. In a study by Harer[1], he showed in 10 cases of intestinal obstruction complicating pregnancy, nine patients required operation and one was managed conservatively. There were no maternal mortalities, but this was in contrast to a 22% mortality in cases reported in the literature during the last 30 years. It was noted by Harer that the major forms of obstruction in pregnancy are volvulus, simple obstruction from bands and adhesions and extensive pressure from the pregnant uterus. It was delineated that with proper diagnosis and management, obstruction in pregnancy should not carry a grave prognosis for the mother. In a review by Griffen, Dilts, and Roddick[2] of non-obstetric surgery during pregnancy, the hazards of intestinal obstruction during pregnancy are again delineated as well as the problems of GI bleeding.

Gastrointestinal bleeding should have been diagnosed earlier and proper treatment instituted.

In summary, this case represents the difficulties in making judgement when an autopsy is not performed.

References

1. Harer, W. B., Jr.: Intestinal Obstruction Associated with Pregnancy. *Obstet. Gynecol.* 19:11, 1962.
2. Griffen, W. O., Jr., Dilts, P. V. Jr., and Roddick, J. W., Jr.: Non-Obstetric Surgery During Pregnancy, Current Problems in Surgery. A series of monthly monographs, November, 1969.

STATEMENT OF OWNERSHIP MANAGEMENT AND CIRCULATION

(Act of August 12, 1970; Section 3685. Title 39, United States Code)

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A. Total no. copies printed:	3238	3300
B. Paid circulation:		
1. Sales through dealers and carriers, street vendors and counter sales:	148	167
2. Mail subscriptions	2736	2786
C. Total paid circulation:	2884	2953
D. Free distribution by mail, carrier or other means:		
1. Samples, complimentary, and other free copies:	300	307
2. Copies distributed to news agents but not sold:	0	0
E. Total distribution	3184	3260
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DELEGATES' DELIBERATIONS

Y'All Come!

COME to Cincinnati November 26 for the Clinical Convention of the American Medical Association. This offers a good opportunity for physicians in Kentucky to visit a national AMA convention and partake of scientific and business sessions.

The clinical sessions will be devoted to care of patients with heart disease, particularly arrythmias. Other topics will include joint disease, infectious disease, non-institutional psychiatric care, dermatology, obstetrical problems, pediatrics, common-encountered problems of the head and neck and practical anesthesia. There will be a combined session on neurology and neurosurgery, a one-day session on gastroenterology, a half-day session on diabetes and a special session dealing with new approaches to old problems.

There will be three postgraduate courses including "Blood Gases, Fluid and Electrolyte Balances," "Practical Endocrinology" and Principles of EKG Interpretation." The program will be presented in the Cincinnati Convention Center—further details of the exact program will be mailed to you and will also be published in the *AMA News* as well as *JAMA*.

The second major area will be the business of the House of Delegates. The House will convene on Sunday afternoon, November 26. Monday will be devoted to Reference Committee hearings. Tuesday and Wednesday will feature the sessions of the House to consider these Reference Committee reports. One of the special events will be a national conference on chiropractic on Sunday morning, November 26.

In addition, there will be an open hearing by the Council on Long Range Planning and Development Monday, November 27 from 1-6 p.m. If anyone would like to speak at this hearing, proper procedure can be obtained from the KMA Headquarters Office or from any of the AMA delegates. The sessions of the House of Delegates and other business meetings will be held in the Netherland Hilton Hotel.

All KMA delegates, alternates and officers invite you to attend and please call on us if we can be of service to you.

DAVID B. STEVENS, M.D.
KMA Delegate to AMA

Continuing Educational Opportunities

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IN KENTUCKY

NOVEMBER

15 Medical Lecture, "Interpretation of Arterial Gases," by Gordon Snider, M.D., Boston General Hospital; Jewish Hospital, Louisville

DECEMBER

14 Norton Medical Seminar, "Current Management of Difficult Gastrointestinal Problems," 10:00 a.m., Norton Memorial Infirmary, Louisville

15-16 Postgraduate course, "Pediatric Ophthalmology," Jonathan Wirtschafter, M.D., Program Chairman, University of Kentucky Medical Center. Fee: $75 for practitioner and $10 for resident. Further information:
Frank R. Lemon, M.D., Associate Dean for Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506

20 Medical Lecture, "Rebuilding Hands," by Harold E. Kleinert, M.D., University of Louisville; Jewish Hospital, Louisville

IN SURROUNDING STATES

NOVEMBER

10 Postgraduate course, "Clean Air Symposium," Cleveland Clinic, Cleveland

13-16 Annual meeting, Southern Medical Association, New Orleans

15-16 Postgraduate course, "Gastroenterology: Current Topics," Cleveland Clinic, Cleveland

26 14th National Conference on the Medical Aspect of Sports, Cincinnati

26-29 Clinical Convention, American Medical Association, Cincinnati

DECEMBER

6-7 Postgraduate course, "Current Concepts in Ophthalmology," Cleveland Clinic Foundation, Cleveland

8 Postgraduate course, "Geometric Total Knee Arthroplasty," Cleveland Clinic Foundation, Cleveland

8 Annual Pediatric Symposium, Le Bonheur Children's Hospital—University of Tennessee College of Medicine, Memphis



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Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction, patients should be carefully monitored.
Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live Ascaris in the mouth and nose. Hypersensitivity reactions

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Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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addendum

INDICATION | DOSAGE SCHEDULE

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MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.
The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

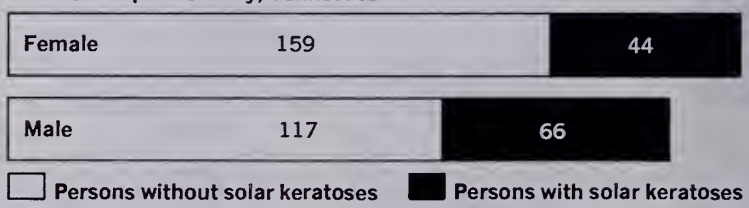
What it means to live and work in Tipton County, Tennessee

Persons who are white and over 40 have one chance in four of having solar keratoses... which may be premalignant

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

Prevalence of solar keratoses in white persons over 40 in Tipton County, Tennessee



*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction (only in affected areas)* usually occurs within two weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

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Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

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Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

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Medicare Revisions Listed

A recent release from the Department of Health, Education and Welfare indicates that the inpatient hospital deductible under Part A of Medicare will be increased from $68 to $72 for benefit periods **beginning** in 1973.

The law also specifies that coinsurance amounts must be proportionate to the inpatient hospital deductible. Thus, for benefit periods starting in 1973, the deductible amount for the first 60 days of inpatient hospital care will be $72; the hospital coinsurance amount for the 61st through 90th day of each benefit period will be $18 a day; and the hospital coinsurance amount for each lifetime reserve day used will be $36 a day. For the 21st through 100th day of services in an extended care facility, the coinsurance amount for benefit periods starting in 1972 will be $9 a day.

In another HEW release, it was stated that Medicare providers must now file final cost reports with the Social Security Administration within 45 days from the time the provider terminates participation in the Medicare program or undergoes a change in ownership.

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"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

– George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

Results of a questionnaire to 7,000 physicians:

62.9%
Believe combination drug products are useful.

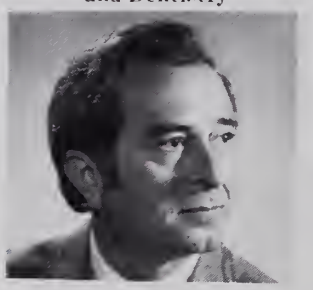
13.8%
Do not believe combination drug products are useful.

Are combination drug product useful in treatment involvin concomitant use of two or more drugs

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility – and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription—which is more than can usually be said for the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to he found, and for them the prefabricated combination must he rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin hut forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good example of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to he safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

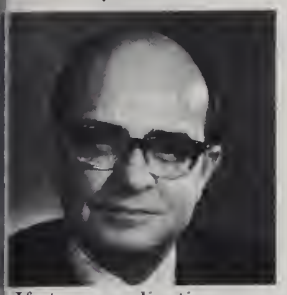
The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investigators and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to prescriptions that have been in use for a number of years that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA performed quite well. I am thinking particularly of penicillin - streptomycin combinations that patients—especially surgical patients—were given in injection. This made for less discomfort for the patient, less demand on nurses' time, and fewer opportunities for dosage errors. To take such a preparation off the market doesn't seem to he good medicine, unless actual usage showed a great deal of harm from the injection (rather than the proper use) of the combination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who should determine which is which. Obviously, the FDA must play a major role in making this determination. In fact, I don't think it can avoid taking the ultimate responsibility, but it should enlist the help of outside physicians and experts in assessing the evidence and in making the ultimate decision.

Maker of Medicine

W. Clarke Wescoe, M.D.
President
Winthrop Laboratories



If two medications are sed effectively to treat a rtain condition, and it is own that they are com- atible, it clearly is useful d convenient to provide em in one dosage form. would make no sense, in ct it would be pedantic, insist they always be rescribed separately. To void the appearance of edantry, the "expert" de- ies the combination be- use it is a fixed dosage rm. When the "expert" vokes the concept of fixed osage form he obscures e fact that single-ingre- ent pharmaceutical prep- rations are also fixed osage forms. By a singular mantic exercise he im- lies a pejorative meaning the term "fixed dose" ly when he uses it with spect to combinations. hat is ignored is the sim- le fact that only in the rest of circumstances es any physician attempt titrate an exact thera- utic response in his pa- ent. It is quite possible at some aches and pains ill respond to 500 mg. of spirin yet that fact does t militate against the *us- l* dose being 650 mg.

The other semantic ploy ten called into play is to escribe a combination oduct as rational or irra- onal.

Take antibiotic mixtures, e source of much of the iticism generated against combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by $443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irrefutable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

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Cutaneous Changes in a Case of Purpura Fulminans Following Pneumococcal Pneumonia†

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Purpura fulminans is a rare disorder characterized by purpura of the extremities which is followed by shock and frequently terminates in death. The purpose of this paper is to present clinical and pathologic findings of the skin in such a case.

Report Of A Case

CHIEF complaint—A 68-year-old, white, married, disoriented female was admitted to the University of Kentucky Medical Center on September 12, 1969, with many "sore bruises" over the extremities. The history was obtained from the patient's husband.

Present Illness—Three weeks prior to admission she was admitted to a local hospital with lobar pneumonia. Sputum cultures grew Pneumococcal pneumoniae and chest x-ray showed consolidation of the right lower lobe of the lung. She improved rapidly following penicillin therapy and was discharged.

Two days later she developed swelling and purple discoloration of three toes of the left foot and was readmitted to the same hospital. She was given heparin; however, the cutaneous lesions worsened and she was admitted to the University of Kentucky Medical Center Hospital three days later.

Review of Systems—The patient had atrial fibrillation and retention of fluid for which she had taken Lanoxin and Hydrodiuril intermittently for many years.

Physical Examination—Temperature 98.4° Respirations 24/min. Blood pressure 100/70 mmHg. The patient was disoriented and bedridden. Ten dark purple lesions which varied between 4.0 cm and 10.0 cm in diameter were present on the elbows, hands, thighs and feet. The lesions did not fade on pressure and were tender to palpation. Chest: breath sounds were barely audible, being less on the right side than on the left. Heart: a blowing systolic murmur was loudest at the apex and lower left sternal border. Abdomen: the liver, spleen and kidneys were not palpable. Extremities: Two-plus pitting edema of the left leg. The dorsalis pedis pulses were strong and equal. Neurological: the reflexes were intact.

Laboratory Data—CBC Hgb 11.5 mg/100 ml, WBC 27,400 mm². Differential segmented neutrophils 76%, stab neutrophils 18%, lymphocytes 2% and monocytes 4%. Urinalysis: pH 5.0, sp. gr. 1,023, protein 1+, ketone negative, glucose negative, 15 RBC/HPF and 4+ bacteria. Blood urea nitrogen 62 mg%, fasting blood sugar 126 mg%, sodium 132 meg/liter, potassium 4.3 mg/liter,

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carbon dioxide 24 mg/liter and chloride 95 meg/liter. Platelet count 270,000, prothrombin time 14.5 seconds with control of 15.0 seconds, clotting time 2 min, partial thromboplastin time 30 seconds with control of 40 seconds and fibrinogen level 410 mg/100 ml. Chest x-ray revealed pulmonary congestive changes and a possible mass in the right hilum. Electrocardiogram showed atrial fibrillation and ventricular enlargement.

Hospital Course

The patient was placed on a 1200 calorie diet, digoxin 0.25 mg daily, Diuril 500 mg every six hours. Two days later she became stuporous.

The purple skin lesions noted on admission extended and became dark black in color. Bullae, 1.0 cm to 3.0 cm, developed over the lesions of the feet and legs (FIG. 1). The feet became cold and the skin had a shriveled, dried-up appearance. The central black area on the arm began to retract and in four days a moat was visible between the eschar and surrounding normal skin. Underlying muscle could be seen in the moat. Elevations from 0.05 to 1.0 cm in diameter were noted over the sweat pores. The toes became gangrenous. The respirations became labored and temperature was elevated to 102° F. The patient expired quietly eight days after hospitalization.



FIG. 1. Shows gangrene of the toes and a ruptured bulla.

Biopsies of the skin prior to death show the epidermis to be intact; however, it appears necrotic. The cytoplasm and nuclei of the epidermal cells stain gray with hematoxylin and eosin. There are many red blood cells lying between collagen bundles. The sweat glands are



FIG. 2. Shows necrotic sweat glands. H & E x 150.

necrotic (FIG. 2) and the sweat ducts are dilated.

Sections of skin taken at autopsy show subepidermal vesicles (FIG. 3), red blood cells in various stages of degeneration in the dermis and subcutaneous fat and necrosis of collagen bundles. There are pyknotic cells throughout the dermis and subcutaneous fat.

There is an organizing thrombus in the wall of a large artery in the deep subcutaneous fat (FIG. 4). The thrombus underlies necrotic skin.

Comment

Purpura fulminans occurs most commonly in young children and most frequently follows infectious diseases such as scarlet fever[1] and chicken pox[2]. Our case is unique in that the patient was 68 years of age and the condition apparently was triggered by pneumococcal pneumonia. There are rapidly spreading skin hemorrhages of the extremities and the skin may become bluish-black and serosanginous bullae may develop. Extensive necrosis of the

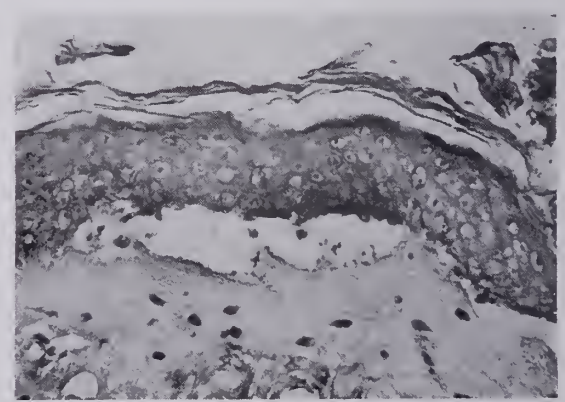


FIG. 3. Shows a subepidermal bulla. H & E x 200.

skin may occur. The problem may be so severe that amputation of both extremities is necessary as reported by Dick[3], Webb[4], Heal[5] and Stamey[2]. Clinically the progression of the skin lesions in our patient was interesting. They began as reddish-purple areas which did not fade on pressure. Later some of the lesions formed bullae. The central areas became dark purplish-black in color and the central part separated from the surrounding normal tissue leaving a moat at the base of which could be seen underlying muscle and blood vessels. The moat was similar to that seen in pyoderma gangrenosum and polymorphous eruption with arthritis[6]. The vesicles and bullae dried and the skin

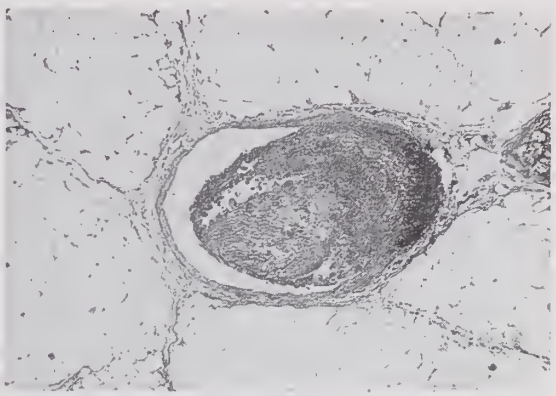


FIG. 4. Shows a thrombus in dermal blood vessel of subcutaneous fat. H & E x 100.

Chart 1

AUTHOR	ETIOLOGY	LABORATORY ABNORMALITY	TREATMENT	RESULT
Becker et al.[10]	Varicella	Low platelets	Erythromycin Methyl prednisolone Tegopen	Survived with skin grafts
Fishbein[11]	Varicella	Inc'd * bleeding time Inc'd clotting time Low fibrinogen Low platelets	Fibrinogen Fresh whole blood Steroids Antibiotics	Survived with amputation of three toes
	Beta hemolytic streptococci	Low platelets	Antibiotics Blood Sterolds Thiomerin	Survived with supramalleolar amputation
	Meningococcemia	Low platelets	Steroids Antibiotics	Survived with amputation
Bouhasin[12]	Varicella	Inc'd bleeding time Inc'd clotting time Inc'd prothrombin time Low fibrinogen Low factor V Absent clot retraction	Fresh whole blood Vitamin K	Survived with skin grafts
Hattersley[13]	Varicella	Inc'd prothombin time Low platelets Absent fibrinogen	Heparin Fresh whole blood Fibrinogen Prednisone Antibiotics	Survived
Hjort, et al.[14]	Beta hemolytic streptococci	Inc'd bleeding time Low platelets Low fibrinogen Low factor II, X, V, VII	Heparin Hydrocortisone	Survived with skin grafts
Cram and Soley[15]	Meningitis	Low platelets Inc'd bleeding time Inc'd prothrombin time	Heparin Antibiotics Steroids	Survived with amputation and skin grafts
Creveld et al.[16]	Scarlatina	Inc'd bleeding time Inc'd clotting time Inc'd prothrombin time No clot retraction No fibrinogen	Vitamin K Vitamin C Fibrinogen Prednisone Fresh whole blood	Survived
Allen[17]	Varicella	No clot Low fibrinogen Low prothrombin	Heparin	Survived. Skin grafting not necessary.

* Increased

Chart 1 summarizes the treatment and results of 10 cases that survived.

eventually turned black and was obviously gangrenous.

It has been proposed by Glanzmann[7] that purpura fulminans is the most severe form of Henoch's purpura. Both Henoch's purpura and purpura fulminans are basically a vasculitis; however, in the fulminans type the vasculitis is so severe that it leads to necrosis of the involved tissue.

Purpura fulminans is probably a form of an anaphylactoid purpura. Organisms which are apparent sensitizers include hemolytic streptococcus, pneumococcus, varicella and measles. In a case reported by Kost[8] the disorder followed ingestion of spoiled ham. Our patient was unusual in that she developed purpura fulminans following pneumococcal pneumonia which occurred about three weeks prior to her demise. The patient additionally had received penicillin which is a known sensitizer and there is a possibility that this drug was an etiological factor in our case.

Various clotting factors may be greatly reduced in this disease. Heal and Kent[5] reported no fibrinogen in their case. Chambers[1] observed a low prothrombin concentration. Factor V (labile factor) was found by Koller[9] and his associates to be reduced. In all probability the massive necrosis liberates proteolytic enzymes which causes the disappearance of fibrinogen and other clotting factors from the blood. We found no coagulopathy. Whether the blood picture was altered by the heparin which was administered prior to admission to the hospital is not known. We did not give heparin as there was no demonstrable coagulopathy.

Chart 1 summarizes the treatment of ten cases that survived. Although varied, the most therapeutic regimens include heparin, steroids and antibiotics. The object of treatment is cessation of intravascular clotting and prevention of antigen-antibody reactions. Heparin with its anticoagulant activity is effective in stopping intravascular clotting and preventing further depletion of fibrinogen.

The rationale of the steroid therapy is based on the assumption that purpura fulminans is an allergic reaction. Steroids control many disorders due to antigen-antibody reactions. Antibiotics should be used to eradicate infection when purpura fulminans is known to follow scarlet fever, meningiococcal meningitis and pneumococcal pneumonia. Antibiotics should also be given to prevent and treat infected ulcers.

The pathology noted here was most interesting as there were thromboses of deep dermal blood vessels as well as of superficial blood vessels. These changes undoubtedly led to the necrosis of epidermal cells, sweat glands, dermis, and subepidermal bullae.

Generic and Trade Names of Drugs

Digoxin — *Lanoxin.*
Hydrochlorothiazide — *Hydrodiuril.*
Chlorothiazide — *Diuril.*
Sodium cloxacillin — *Tegopen.*
Sodium mercaptomerin — *Thiomerin.*

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Plexonal: A General Practitioner's Choice For Relief of Anxiety Reaction

Clifford F. Kerby, M.D.

Berea, Kentucky

Forty-three mildly to moderately anxious outpatients received Plexonal. Nervousness, anxiety and tension decreased in more than 90%, and depression and fatigue in more than 80%. None experienced side effects.

CERTAIN patients frequently seen by the general practitioner show excessive anxiety and restlessness. This anxiety often arises from apprehension over a physical injury or disease. The physical problem may be directly responsible for the office visit, that is, the patient wants relief of pain or discomfort from some specific condition. Commonly, however, the actual somatic complaint is not the reason for seeking the aid of the family physician. Rather, the patient has become so restless, anxious or nervous that his physical problem seems secondary. He may be manifesting such irritability that he is constantly at odds with family or co-workers, or he may be easily fatigued and unable to sleep.

We had read with interest a study of the use of Plexonal* by Charles Scheifley, M.D.[1] of the Mayo Clinic, a study in which the therapeutic effects of Plexonal were compared with those of an agent formerly used in treating chronic anxiety. Further studies [2-4] in which Plexonal was used to treat chronic anxiety combined with or resulting from somatic complaints encouraged us to try Plexonal in a population of outpatients of a general practice.

Material and Method

Forty-three patients suffering from chronic anxiety were treated with Plexonal in a general office practice. The average patient age was 49 years, the youngest being 20 and the oldest, 79. Seventy-four per cent of those treated were females, and less than five per cent of the patients were unmarried. As seen in Table 1, over half of the patients were housewives. Complete demographic information is given in this table.

On the basis of the severity of their symptoms on their initial office visit, some patients were instructed to take one Plexonal tablet three times a day while others were told to take a tablet four times a day. Medication was prescribed on a p.r.n. basis—with instructions not to take more than four tablets a day—for three of the patients who showed marked improvement toward the end of the treatment period. The average treatment period in this study was about six months.

The chronic apprehension shown by most of these patients was the result of a somatic complaint such as cardiac disease, back injury or arthritis, and was manifested in most cases as tension, nervousness or anxiety. In some patients, however, chronic anxiety was shown by other symptoms such as insomnia and fatigability. Previous experience in assessing the mental attitude of this type of patient led us to use a rating scale comprised of nine items—those listed above, and in addition, depressive mood, inability to concentrate, sweating and dizziness. Patients were rated as to the severity of each of these nine symptoms on their

TABLE 1

Demographic Data

Age		Sex	
Range	20-79	Female	32
Mean	49.4	Male	11

Marital Status		Occupation	
Married	41	Professional	3
Single	1	Managerial	1
Widowed	1	Skilled	5
		Unskilled	3
		Housewife	23
		None	8

*Plexonal®, *sodium diethylbarbiturate, sodium phenylethylbarbiturate, sodium isobutylallylbarbiturate, scopolamine hydrobromide, and dihydroergotamine methanesulfonate, Sandoz Pharmaceuticals, Hanover, N.J.*

TABLE 2

Symptomatic Improvement

Symptom	No. of Patients Showing Symptoms	Pre-treatment Mean	Post-treatment Mean	Mean Improvement*
Nervousness	41	3.07	1.83	1.24
Anxiety	41	3.02	1.83	1.20
Tension	41	2.98	1.80	1.17
Insomnia	17	2.65	1.65	1.00
Sweating	2	2.50	1.00	1.50
Dizziness	4	2.25	1.25	1.00
Inability to Concentrate	9	2.22	1.44	0.78
Fatigability	25	2.20	1.28	0.92
Depressive Mood	29	2.14	1.21	0.93

* $p < .05$ except for Sweating where $p = .10$

initial office visit. Ratings were made on each subsequent visit for lengths of treatment varying from one month to one year and nine months. A four-point rating scale was used to describe symptom severity: 1 = none, 2 = slight, 3 = moderate, 4 = severe. In addition, an end-of-trial global rating was made. Overall therapeutic effectiveness was adjudged excellent, good, fair or poor.

Results

Therapeutic efficacy was assessed on the basis of pre- and post-treatment ratings. These ratings are listed in Table 2. Statistically significiant improvement ($p<.05$) is recorded in eight of the nine symptoms. The greatest improvement was noted in the "primary presenting symptoms, nervousness, anxiety and tension; more than 90% of the patients manifesting these symptoms showed improvement. More than 80% of the patients manifesting depression or fatigability were improved, as were over 70% of those suffering from insomnia.

Global ratings made at the patients' last office visits showed "excellent" or "good" alleviation of symptoms in 88% of the patients. A "fair" response was noted in nine per cent of the patients, while the remainder were rated as "poor" responders (see Table 3). No side effects were reported for any of the 43 patients in the study.

Discussion

Our experience confirmed the therapeutic efficacy demonstrated by Plexonal in previous studies. The compound was extremely effective in controlling symptoms exhibited by anxious, restless patients seen in general practice. The sedative-relaxant effect of the medication provided the anxiolytic activity needed for daytime control of such symptoms as nervousness and tension. Patients also experienced nighttime sedation with a resultant relief of insomnia.

Most patients had taken various sedatives and tranquilizing compounds before the trial reported here. Not only did the symptomatic and global ratings made by the physician show significant therapeutic benefit, but spontaneous comments made by patients as they visited the physician verified these observations. The patients made a number of unsolicited statements of preference for Plexonal over previous medications such as meprobamate, the medication most commonly used by this group of patients. Some medications previously prescribed for our patients, were continued during this study. These concomitant medications were mainly for the relief of some of the underlying physical complaints such as hypertension or arthritis. In most cases, this additional medication was prescribed on a p.r.n. basis and taken only intermittently.

The therapeutic benefit derived from Plexonal was enhanced by the fact that its administration caused no side effects. Our findings in this area agree with those of previous studies[5, 6] in which patients reported feeling less drowsy, less fatigued and did not experience any drug "hangover" effect. This is especially important in the outpatient setting where

TABLE 3

Global Improvement

Rating	# of Patients	% of Patients
Excellent	19	44.2
Good	19	44.2
Fair	4	9.3
Poor	1	2.3
TOTAL	43	100.0

any slight adverse reaction to medication would accentuate the patient's anxieties rather than relieve them. There is no doubt in our minds that there is definitely a place for such a well-balanced[7] barbiturate preparation in the treatment of anxiety states.

Summary

Forty-three patients exhibiting symptoms associated with mild to moderate anxiety were treated with Plexonal in general office practice. This compound was highly effective in relieving anxiety and tension associated with a variety of somatic complaints. Of patients exhibiting the most characteristic symptoms rated—anxiety, nervousness, and tension—over 90% were significantly improved. Global ratings also showed a high degree of effectiveness: 88% of the total patient population had an excellent or good therapeutic response to Plexonal. There were no side effects reported for any of the patients.

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The Comprehensive Care of Patients with Spina Bifida

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This paper is an analysis of the clinical experience in treating an open spina bifida lesion at the University of Kentucky Medical Center from 1962-1971.

DURING the last 10 years there has been a widespread recognition that the newborn infant with an open spina bifida lesion should receive a neurological assessment and the possibility of surgical treatment within the first few hours of birth. The results and implications of such a policy are now becoming clear, and the necessity to provide a comprehensive service which will meet the complex requirements of these patients within a particular geographical area is now apparent. This paper describes the experience of one center within Kentucky which has been treating patients with this condition during the last 10 years, and suggests some organizational details for regional policy.

Clinical Methods

From 1962 onwards, patients have been referred to this Center at various stages following birth, and in the last three years, the referrals have mostly been made within the first 24 hours of the infant's life. After initial general and neurological assessment, the majority of these patients have had the back lesion surgically closed, and have subsequently received neurosurgical treatment for hydrocephalus. The neurosurgical division has retained a responsible role in the management of the infants thereafter, with the help of the pediatrician, orthopedic surgeon and urologist, who have been called in as the clinical necessity has arisen.

During the past three years, it has been the increasing practice to obtain urological and orthopedic assessment during the neonatal period, in order to establish baselines and initiate whatever treatment is necessary at that stage, as well as obtaining urological and orthopedic assistance at the outpatient clinics. The majority of readmissions for hospital throughout the first and second years of life have usually been for shunt revisions or urinary tract complications. A few of the more elective orthopedic procecures have also been undertaken in this Center, but the majority of children requiring long-term orthopedic care have been referred elsewhere. When such referrals elsewhere have occurred, an endeavor has been made to retain some follow-up of the child at this Center, despite the obvious disadvantages of bringing children to two separate centers from any great distance. Clinical data have been recorded not only in the customary hospital notes, but also in a previously coded form permitting computer analysis.

Closure of the myelomeningocele lesion by the neurosurgeons has followed a fairly standard technique of isolating and preserving the neural plaque and myelodysplastic area, achieving in nearly every case a dural covering for the spinal cord, and then a double-layer closure of the skin which has been obtained after generous undermining.

Hydrocephalus has been judged primarily by clinical examination of the anterior fontanel and the skull circumference, and, when present, treated by a ventriculo-atrial shunting procedure using the Pudenz-Heyer type of valve. The orthopedic procedures have consisted of correcting established deformities such as talipes and dislocated hips, applying braces to the paralyzed legs, and correcting the kyphotic deformities by surgical spinal osteotomy in a few of the older patients.

The main urological procedure, which has been undertaken when the upper urinary tract shows persistent dilatation, is the ileal-loop bladder.

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The clinical results for the patients prior to 1970 are presented in terms of the number known to be surviving from the total originally seen at the Center. Between 1970 and 1971, the analysis is based on the initial hospital admissions and re-attendances of the patients born during that period, the clinical information upon these permitting a very detailed assessment.

Discussion

The incidence of spina bifida shows regional variations, and the true incidence in Kentucky will remain unknown until accurate recording of congenital malformations in live births, still births and deaths is achieved. A well-accepted national average is 2/1,000 live births[1], and on this basis a calculation can be made from the Kentucky population and birth rate which results in an anticipated 116 cases a year. The number of patients treated in this Center is only approximately a quarter of this calculated total for the State, and it could be concluded that the remainder are either referred to various other centers, not referred at all or the actual incidence in the State is significantly lower than the national average.

TABLE 1

Total Patients

	Prior to 1970	YR. OF BIRTH 1970	1971*	TOTALS
Currently followed in clinic	39	14	17	70
Followed elsewhere	6	2	0	8
Lost to follow-up	9	2	0	11
Died	37	5	11	53
	91	23	28	142

(Crude Survival to May 1972)
*Includes two patients initially treated elsewhere.

The patients born before 1970, and totalling 91, have a surviving 39 being followed in the clinic (Table 1), and these patients give a picture of the later fate of children with treated spina bifida lesions. Many are totally paraplegic, and some of these have a relatively independent wheelchair existence, while others are still carried around by their parents. Among the severely paraplegic patients mental retardation is common, and educational achievement and opportunity is small. However, even among the severely paraplegic patients, there are those with treated hydrocephalus who have sufficiently retained intellectual function to be educated, and there is an important group of surviving children who are partly paraplegic and ambulating with braces and orthopedic help, who are entirely educable, given a suitable opportunity.

TABLE 2

Time Of First Assessment

	Reported	Subsequently Died
0 - 24 hours	39	10
24 - 48 hours	3	2
48 hours - 1 week	5	0
1 week - 1 year	2	0

Detailed analysis of the 49 patients seen at this center without prior treatment elsewhere, and born during the years 1970-1971.

A small number of the survivors have a minimal neurological deficit, and live a more or less normal life. The majority of these older children show the ravages of repeated infections of their neurologically abnormal urinary tracts, and many have already had ileal-loop diversionary procedures. The overall picture of these older surviving children is a small but confirmatory reflection of experience elsewhere with very large groups[2], and the significance of their urinary tract problems in their later survival has been previously emphasized in this *Journal*[3].

The infants born in 1970 and 1971, and first seen for treatment in this Medical Center, form the basis of the detailed clinical analysis of this condition. Table 2 shows that the majority were seen within the first 24 hours of life, and most of the patients come from Central and Eastern Kentucky (Table 3). The lesions were all superficially obvious (spina bifida aperta), but some were covered with some type of abnormal skin or membrane, and the majority had neural tissue exposed as a frank neural plaque (Table 4). Well over half of the lesions were of large size, and therefore difficult to close (Table 5). Table 6 indicated that there is a tendency for the lesions limited to the sacral region to be less frequently associated with hydrocephalus, and these are certainly the children with minimal neurological deficit who can profit most from surgical treatment. The skull

TABLE 3

Area of Residence

Central Kentucky	23
Eastern Kentucky	19
Western Kentucky	5
Tennessee	1
Other	1

TABLE 4

Type of Spina Bifida Lesion

Abnormally thin skin	3
Fully formed, but abnormal skin	5
Membrane Covering:	
Flat, intact	3
Bulging, intact	5
Covering and not intact	2
Granulating and leaking	5
Membrane and granulation intact	1
Granulation and neural plaque	9
Neural plaque (frankly open)	16

TABLE 5

Size of Spina Bifida Lesion

Under 1 cm	1
1 - 2 cm	4
2 - 3 cm	3
3 - 4 cm	5
4 - 5 cm	8
5 - 6 cm	11
6 - 7 cm	7
7 - 8 cm	7
8 - 9 cm	2
9 or greater	1

TABLE 6

Site of Spina Bifida Lesion

		With Hydrocephalus
Sacral	9	4
Lumbar	5	4
Thoracic	1	1
Cervical	3	2
Thoraco-lumbar	7	7
Lumbo-sacral	14	14
Thoraco-lumbo-sacral	10	9

TABLE 7

Spinal Abnormalities (X-ray)

No hemi-vertebrae or double ribs	30
Hemi-vertebrae only	8
Double ribs only	3
Hemi-vertebrae and double ribs	7
Diastematomyelia and above	1

TABLE 8

Skull X-ray

Normal	10
Shallow posterior fossa	12
Shallow posterior fossa and craniolacunae	26
No entry	1

TABLE 9

Preoperative Assessment of Leg Movements

	Right	Left
Too ill to assess	1	1
No entry	0	0
No movement	9	12
Spontaneous hip	6	3
Spontaneous ankle dorsi only	1	2
Spontaneous hip and ankle	0	1
Spontaneous hip and knee	3	1
Spontaneous hip, knee and ankle	14	13
Spontaneous, not quite full	1	3
Full movement	14	13

and spinal x-ray findings shown in Tables 7 and 8 reflect the more common mesodermal abnormalities associated with spina bifida, and on the whole there is an association of these findings with the severity of the hydrocephalus and the spinal neurological deficit. The preoperative assessment of the lower limb movement is made by a simple neurological examination, which has been described elsewhere[4], and Tables 9 and 10 indicate the varying degrees of paralysis and sensory levels found in these newborn infants. The majority of the lesions were closed within 24 hours of birth (Table 11), and the details of the operative findings, which are very relevant to the degree of neurological deficit displayed by the infants, and their future orthopedic and urological management, are contained in Table 12.

The effect of the operation upon the sensory and motor-neurological function is listed in Tables 16, 17 and 18, and the lack of significant change in the majority of patients confirms previous observations[4].

A primary closure of the skin defects caused by these large spina bifida lesions is often accompanied by necrosis of the skin edge in the postoperative period, and occasionally this is a source of secondary infection, which can lead to meningitis. In the majority of the patients, satisfactory healing by primary or secondary intention has usually occurred, and in two patients split-thickness skin grafts were employed as a secondary procedure to obtain healing (Table 13).

The presentation of hydrocephalus, shown in Table 14, illustrates that over 80% of these patients do have a degree of hydrocephalus requiring surgical treatment, and lesser degrees of hydrocephalus could well have been missed using the clinical criteria which we have adopted. This incidence of hydrocephalus in patients with myelomeningocele lesions corresponds closely to findings elsewhere[2, 5]. Following the operative procedure for hydrocephalus (Table 15) the overall results have been satisfactory, but only by dint of readmitting the children from the outpatient clinic whenever there was the slightest suggestion of recurrence of hydrocephalus, and revising the shunts as necessary. In the 36 patients in whom the hydrocephalus has been surgically treated, at least 34 shunt revisions have oc-

curred in the 1970-71 period. Some of these repeated revisions have been in a relatively small group of patients, but the majority of patients who have the hydrocephalus treated in the neonatal period will require a further shunt revision around six to nine months later, and almost all of the patients have had at least one shunt revision by the age of two years. Thereafter the shunt revisions are less frequent.

Table 20 gives some indication of the causes of readmissions among the 49 patients when only the 1970-1971 period is taken, and the actual incidence of readmission can only be assessed when the same length of follow-through from birth is applied to each child. Table 19 shows that 1/7 of the infants died during the first hospital admission, and the majority of the remainder were neurologically unchanged or improved, and in good condition. The causes of the 12 deaths which occurred among the 49 patients in the 1970-71 period are listed in Table 21, and these have been ascertained by clinical record, report from relatives of patients, or by postmortem examination. During the first two years of life the spina bifida child is more likely to suffer from complications of the hydrocephalus or the high spinal lesion, and to succumb from raised intracranial pressure, brainstem failure, pneumonia or shunt complications.

During the first year of life the number of readmissions for urological problems is relatively low, but begins to increase during the later years. Tables 22 and 23 show the renal tract findings in these infants at this early stage.

The survival curve shown in FIG. 1 gives a more useful concept of the outcome of this active treatment of newborns for myelomeningo-

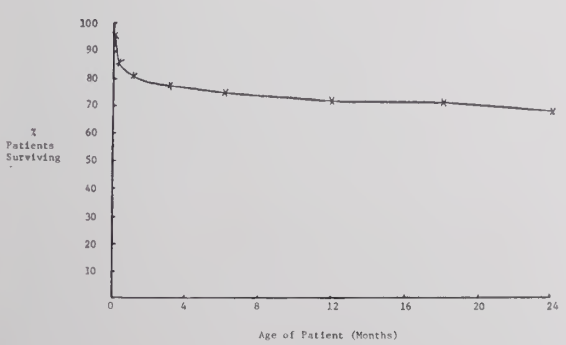


FIG. 1. Survival curve of patients in survey.

TABLE 10

Preoperative Assessment of Sensory Level

	Right	Left
No abnormal level	14	12
Above T_6	4	4
No entry	0	0
T_7 - T_8	5	5
T_9 - T_{10}	6	6
T_{11} - T_{12}	1	0
L_1	1	2
L_2	2	2
L_3	3	3
L_4	2	3
L_5	3	4
S_1 or below	8	9

TABLE 11

Time of Lesion Closure

Within 24 hours of birth	37
24 - 48 hours	4
48 hours - 1 week	4
1 week - 1 year	2
Lesion too severe for surgery	2

TABLE 12

Operative Findings of Lesion

Normal cord and nerve roots in sac	5
Dysplastic tissue peripheral to conus	6
Dysplastic conus, normal roots	5
Dysplastic conus, abnormal roots	7
Myeloschisis, frank	15
Myeloschisis, overlying granulation	2
Assymetrical lesion	1
Diastematomyelia and myeloschisis	5
No neural tissue dorsal to spina bifida and dysplastic cord or nerves in canal	1
Not operated upon	2

TABLE 13

Postoperative Course After Lesion Closure

Normal	27
Necrosis of skin	9
CSF leak	2
1° wound infection	4
2° wound infection	4
Collection of fluid	1
Not operated upon	2

TABLE 14

Presentation of Hydrocephalus

No clinical evidence	8
Present before spinal closure	18
No entry	1
Significant increase in skull circumference	2
Significant increase in anterior fontanel pressure	11
Significant leakage from wound	7
Combination of above	2

TABLE 15

Operative Procedure for Hydrocephalus

Not performed:	
No hydrocephalus	8
Other reasons	5
Ventriculo-atrial shunt	35
No entry	1

TABLE 16

Postoperative Leg Movement

No chonge	36
Minor improvement	5
No entry	2
Minor loss	4
Mojor loss	1
Major improvement	1

cele lesions, and this agrees with previous observations.

The quality of survival of children who have received surgical treatment in the neonatal period for open spina bifida lesions has now been published for a very large series: in general terms, approximately 50% of the children will reach the age of five years, and 50% of these are likely to be paralyzed from the waist downwards, and another 40% are partly paralyzed. Almost 70% of the survivors have an IQ over 80, and are educable within the limits of their physical capacities. Surgical treatment of the hydrocephalus will have entailed many hospital admissions for the majority of the children, and there will be few who will have normal control of the urinary tract.

The clinical experience of the neurosurgical management of spina bifida over the last 10 years has undoubtedly stimulated a greater appreciation and understanding of this congenital malformation of the central nervous system, and its accompanying hydrocephalus[7], but the long-term results have led to the recent suggestions that early surgery should be more selective, and infants with the following features should not be operated upon:

1) Absence of voluntary hip flexion (*i.e,* a neurological lesion of L1 and above)
2) Established overt hydrocephalus at birth
3) Severe kyphosis or scoliosis present at birth[1, 8]

The formulation of a definite selective policy for the neurosurgical treatment of these infants should follow the provision of an opportunity for early neurosurgical evaluation to all of the patients born with a lesion which is not covered by healthy skin. The neurosurgeon should make the assessment in conjunction with the family practitioner, pediatrician and some knowledge of the family background and then discuss the prognosis for the child and the implications of the surgical treatment quite clearly in terms of degree of paralysis, hydrocephalus and the practical problems of the child walking and being incontinent. This discussion usually has to occur with only the father present, and the majority of parents still indicate that they would like as much as possible done for their child. The neurosurgeon remains primarily responsible for the neonatal care of the infant whether an operation is performed or not, but during the subsequent period, the active neurosurgical role becomes less. Good orthopedic and urological management of these children should be based upon a thorough

TABLE 17

Postoperative Results for Sensory Level

Unchanged	27
Lowered 1 - 2 segments	4
Roised 1 - 2 segments	4
Lowered 5 or more	2
No entry	2

TABLE 18

Postoperative Results for Reflex Movements in Lower Limbs

Unchonged	37
More opparent	7
Less opparent	3
No entry	2

TABLE 19

Final State at End of 1st Admission

Neurologically unchonged; good condition	32
Neurologically unchanged; bad condition	3
Neurologicolly improved; good condition	5
Neurologically worse; good condition	1
No entry	1
Deoth	7

TABLE 20

Causes of Readmission*

Acute hydrocephalus—not shunted	0
Acute hydrocepholus—blocked shunt	25
Infected shunt	5
Investigotion of shunt	4
Blocked shunt—well child	1
Elective orthopedic	1
Elective urological	1
Acute orthopedic	0
Acute urologicol	6
Combinotion of obove	0
Other	9

*1970-71 Period Only

TABLE 21

Causes of 12 Deaths*

Acute Hydrocepholus	2
Infected shunt	1
Respirotory	6
Meningitis	3

*1970-71 Period Only

TABLE 22

Renal Tract Findings on 1st Admission

Intravenous pyelogram	
Normal	26
Mild dilatation	4
Not performed	11
Hydroureter	2
Hydronephrosis	
normal bladder	0
dilated bladder	3
Bladder changed only	2
Malformation of kidney	1
Urine examination	
Normal clean catch specimen	16
Normal catheter specimen	8
No specimen recorded	2
Significant bacteria and cell—	
Clean catch	7
Catheter or suprapubic	16

TABLE 23

Renal Findings at Outpatient Clinic

Intravenous pyelogram	
Normal	19
Not performed (not indicated)	106
Unilateral dilatation of ureter and calyces	3
Bilateral dilatation of ureter and calyces	2
Unilateral failure of dye excretion	1
Bilateral failure of dye excretion	0
Urine examination	
Normal clean catch specimen	1
Normal catheter or suprapubic specimen	11
Significant bacteria	
Clean catch	1
Catheter	36
No specimen taken	77

knowledge of the particular neurological deficit which each infant has, and should begin with the neonatal assessment and continue through the outpatient clinics and hospital readmissions. The pediatrician and family doctor have an active role in the treatment of the children at home, (particularly with recurrent urinary tract infections) and also in further advising the parents upon the implications of the condition which the child has, and upon local resources which may help with braces, medicines, physical therapy and educational possibilities. The routine immunization of these children is also undertaken at home in the majority, and may be modified by the general neurological state of the child.

In the outpatient clinic, which should be run on a comprehensive basis, with neurosurgeon, orthopedist, urological surgeon and pediatrician in full attendance, much attention is paid throughout the first few weeks to the gradual education of the parents to accept and understand the particular problems and limitations of their child. A social worker specifically assigned to the spina bifida children is most useful in this respect. A physical therapist acquainted with the condition and children with neurological deficits can be of great help in the outpatient clinic, and for the long-term inpatient orthopedic management.

Some indication of the immense expense involved in the medical management of these children can be gained by looking at Tables 24 and 25, which show that there are relatively few parents whose private incomes or insurance coverage is sufficient to meet this cost even in the first year or two of the child's life, and the continued expense of the treatment thereafter requires financial support. The altered picture of the majority of crippled children now being those resulting from congenital defects of one sort or another rather than from poliomyelitis, tuberculosis and so forth, necessitates the re-orientation of State and federal organizations toward such problems, and the sharing by the community of the responsibilities for treating these badly crippled, but nevertheless worthwhile children.

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TABLE 24

Cost of First Admissions

Total for 49 newborn infants		$112,925.43
Average for newborn infant		$2,304.60
Range for newborn infant:		
	Lowest	$243.60
	Highest	$6,539.32

TABLE 25

Cost of Readmissions

Total for 28 patients		$69,562.07
Average		$ 2,484.36
Range:		
	Lowest	$ 75.34
	Highest	$8,638.83

Correction

Chondrodystrophia Calcificans Congenita

Nuhad D. Dinno, M.D.* and Bernard Weisskopf, M.D.**

This paper was presented in the October Journal of KMA, pages 777-780; however, a portion of Case I was typeset and inserted into Case II. For that reason, we are reprinting Case I and II in their entirety as they should have appeared in the article.

Case I

Upon referral this 8-1/2-month-old white female presented with multiple congenital bone anomalies, failure to thrive and bilateral cataracts. She was the product of an uneventful full term pregnancy to a gravida VIII, para V, 28-year-old mother. Delivery was spontaneous and uncomplicated in cephalic presentation. Birth weight was 7 lbs and condition was noted to be good. She was kept in an incubator for two days, and discharged on the fourth.

When seen by the family physician at 1-1/2 months of age, her weight was 7 lbs 12 oz and head circumference 13 inches. When seen at 3-1/2 months her weight was 9 lbs 12 oz. Evidence was found of bilateral cataracts and retarded growth and development. Sweat chloride test and chest x-ray were normal, and the patient was referred to an orthopedic hospital in Louisville.

Further x-ray studies revealed generalized, marked, osseous abnormalities, particularly shortened humeri, and stippled epiphyses of the proximal humori and femori. The patient was then referred to the Child Evaluation Center of the University of Louisville School of Medicine.

Physical examination of this 8-1/2 month old child revealed a weight of 13 lbs. 1 oz. (below 5th percentile) with a height of 25-1/4 inches (below 5th percentile) and head circumference of 38-1/2 cm. (below 2nd percentile) (FIG. 1). She appeared to be in no acute distress.

Cranial examination revealed slight asymmetry of the skull, microbrachycephaly and frontal bossing. The anterior fontanelle admitted two fingers, but was not bulging. She presented with saddle-shaped nose, and low set ears. Her lips were thin and crescent shaped and the oral cavity revealed high arched palate and no dentition.

Examination of the extremities revealed short fingers with proximally placed thumbs. Bilateral simian creases were present. Shortened thighs with limited movement at the hip joints in conjunction with tightened abductors were noted.

Neurological examination revealed increased muscle tone in the extremities with hyperactive deep tendon reflexes. There was some tightening of the Achilles tendons bilaterally. The patient had poor head control and was unable to sit alone or with support. Other neurological findings were within normal limits.

Occular examination revealed normal lids, but globes were slightly below average size. Pupils reacted to light. The media revealed dense bilateral cataracts and no details of the structure of fundus could be seen. A halo of red reflex could be seen only around the lens opacities. Vision was believed to be in the range of light perception only, and it was felt that the patient could fix and follow light.

Radiological findings, (FIGS. 2 and 3), revealed stippling of several epiphyses, especially those of the proximal femori and to a lesser extent, the knee joints. The proximal femori and humori showed irregularity and obliquity of the metaphyseal areas. The humeri were short relative to the length of the upper extremities, and the thumbs were inserted low in the hand. The vertebral bodies were ossified in a peculiar manner, appearing like "bow ties" in the lateral projection. A lateral film of the skull was not unusual but specifically noted was ossification of nasal bones.

Laboratory findings included chromosome studies which revealed a normal female karyotype (46 XX). Blood studies included a PBI of 6.0 mcg%, serum calcium 10.4 mg%, phosphorus 5.3 mg%, alkaline phosphatose 8.7 B units and cholesterol 145 mg%. Urine studies by paper and thin film methods indicated an increase in the general pattern of amino acids, but each remaining within normal limits. Tests for sugars and reducing substances were negative. The FeC13 test was also negative.

Psychological evaluation with the Maxfield-Fjeld Social Maturity Scale for the blind indicated a social age attainment of four months.

Case II

History obtained from medical records, MDC, a white female, was born following a full term gestation with uncomplicated labor and delivery. Birth weight was 6 lbs 6 oz, length 21 inches, and head circumference 13 inches. A right valgus foot deformity was noted and she was referred to an orthopedic hospital in Louisville. At one month a correcting short leg cast was applied and a diagnosis of arthrogryposis made.

At age two months, bilateral cataracts were noted.

At age six months, the patient's general physical condition was reported as poor, presenting with marked knee contractures, abduction of the forefeet, bilateral congenital cataracts, epiphysiolitis punctate and retarded growth and development.

The patient's general physical condition deteriorated and contractures became more severe. Between the ages of 9 and 13 months she was hospitalized for bilateral otitis media, acute tracheobronchitis and twice for pneumonia. During these admissions a sweat chloride test was reported as negative. She was noted to have the appearance of Down's Syndrome, and bilateral simian creases were noted. At age one year, weight was 9 lbs. 10 oz. with a height of 26 inches. X-rays revealed thickened joint capsules, and punctate calcification of the patellar epiphyses. Bilateral iris atrophy and glaucoma with synechia in the chamber angles were found. She was unable to hold her head up.

At age two years, x-rays of knee joints revealed stippled calcifications and malformations of the proximal ends of both femurs (FIGS. 4 and 5).

At age three years, she was treated in a hospital for multiple rat bites. At age four years, she died of unknown causes. No postmortem examination was performed.



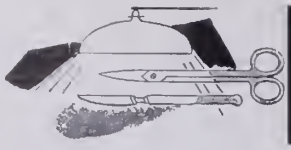
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The University of Kentucky College of Medicine

This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

Acute Dislocation of the Shoulder

THE glenohumeral joint is dislocated more frequently than any other joint in the body. The recognition and prompt treatment of this dislocation should be undertaken by the general practitioner or family physician, as well as the orthopedic specialist. The following information may prove helpful to many physicians throughout the State who are faced with a patient who has a "dislocated shoulder."

Pathogenesis

Most glenohumeral dislocations are due to trauma. In a fall onto the outstretched hand, the head of the humerus may be levered out of the joint by the impinging acromion process of the scapula. Direct blows to the head of the humerus may also drive the head out of the joint. Epileptic seizures may cause muscle contraction and thereby dislocate the shoulder.

The dislocation is classified according to the position of the humeral head. In the *anterior* dislocation, which occurs 90% or more of the time, the head usually lies beneath the coracoid process of the scapula, or near the inferior glenoid rim. In the *posterior* dislocation, the head lies posterior to the glenoid; occasionally the head may be at the same level as the glenoid rim, and the dislocation may not be noted on the usual A-P x-ray view. Posterior dislocations of the shoulder have been associated with seizures in which forceful internal rotation has occurred. The very rare *luxatio erecta* has been described, in which the humerus remains in full abduction with the head lying beneath the glenoid.

It is believed that an anterior dislocation may result in an avulsion of the glenoid labrum from the anterior rim of the scapula. This has been called the *Bankart lesion,* and signifies a residual instability of the joint.

Diagnosis

The clinical examination is the best means of making the diagnosis. The patient has intense pain in the area, and may carry the forearm supported by the other hand. One notes a flattening of the usual convex appearance of the deltoid region. If the patient is not obese, the humeral head can be seen and palpated in its subcoracoid location. One must rule out an acromioclavicular dislocation by inspection and palpation of the acromioclavicular joint. It is also very important to rule out an associated fracture of the neck of the humerus, or avulsion fractures of the greater or lesser tuberosities, especially *before* treatment is undertaken.

Examination of the distal limb for neurovascular integrity is also carried out at this time. Any combination of injuries to the subclavian or axillary artery and brachial plexus is possible, depending on the nature and severity of the injury. However, the structure most often damaged is the *axillary nerve*. This nerve arises from the posterior cord of the brachial plexus, and innervates the deltoid and teres minor muscles. It also gives sensory innervation to the skin overlying the deltoid muscle. Unfortunately, it is often impossible to perform an adequate motor examination when a patient has a dislocated shoulder, since the least flicker of muscular contraction causes intense pain; however, one should suspect axillary nerve damage if there is decreased or abnormal sensation to touch or pinprick of the skin in this region. Such information should be recorded before treatment is begun. One is often surprised at how frequently there is

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evidence of axillary nerve damage, after a diligent sensory examination.

X-ray examination should always be performed to confirm the diagnosis. Associated fractures of the humerus are often seen. Transaxillary and transthoracic x-ray views may be helpful in establishing the exact location of the humeral head.

Treatment

The key to a successful reduction is *adequate anesthesia.* This can be accomplished by several means. A general anesthetic or a supraclavicular nerve block is often used. Many orthopedic surgeons inject one per cent xylocaine directly into the shoulder joint to obtain anesthesia. Intravenous Demerol is often used to provide relief of pain and allow muscle relaxation. Intravenous Valium 10mg. has been used successfully at the University of Kentucky Medical Center. The choice of agent depends on the preference of the physician; so long as the method provided relief of pain and allows muscle relaxation, it will be efficacious. Several of the methods listed above can be carried out in the emergency room, do not require special skills, allow the patient to return home within a few hours, and do not necessitate a costly hospital admission.

Various closed techniques have been employed for reducing a shoulder.

(1) *Hippocratic method*: Traction is applied by grasping the wrist. The stocking-clad foot is pushed into the axilla to provide countertraction. Some object to this technique because it is physically tiring, and may cause damage to the brachial plexus.

(2) *Kocher maneuver*: Traction is applied to the arm in external rotation with the elbow flexed, then the arm is adducted across the chest. This levers the humeral head back into the glenoid. Finally, the arm is internally rotated. A serious objection to this technique is the possible production of a fracture through the humeral neck. Considering the other methods listed and proven, the Kocher maneuver should probably be avoided.

(3) *Simple traction*: Traction is applied by pulling the wrist or forearm. Countertraction is produced by an assistant who stands on the opposite side and holds onto a sheet which is passed around the thorax. One-time honored method consists of having the patient hold onto a bucket of water or sand while lying prone. Some have not found this useful, but other physicians believe it is very successful.

A word of caution: An unreduced dislocation of over seven days duration should probably not be treated unless one is prepared to do an open reduction, since soft-tissue contracture may prevent closed reduction, and too vigorous attempts can cause fractures of the humerus.

After-Treatment and Prognosis

Most authorities agree that some form of immobilization is helpful after reduction, to allow relief of pain, and perhaps to allow adequate healing to reduce the likelihood of recurrent dislocations. Especially in the older patient, prolonged immobilization will certainly result in a stiff shoulder, which can be a severe disability. We recommend the use of a sling to hold up the forearm and an ace bandage to hold the arm to the chest in internal rotation, for a period of three weeks. In the older patient, a simple sling for a few days should be sufficient treatment, with encouragement to do gentle circumduction exercises when the initial pain has subsided.

The likelihood of recurrent dislocations should be borne in mind. Unfortunately, the statistics indicate that a young man about age 20 years, who suffers an anterior dislocation has an 80% chance of recurrence. As the age increases, the likelihood of recurrence decreases, so that by middle age or beyond, the likelihood falls below 20%. Dislocations associated with fractures have a better prognosis than simple dislocations. The reasoning here is that the fracture causes more scar, and this results in a less movable, hence more stable, joint.

Treatment of recurrent dislocations of the shoulder is beyond the scope of this paper. Numerous procedures are available. The choice depends on the experience of the orthopedic surgeon.

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BERNARD L. MANALE, M.D.
ASSISTANT PROFESSOR OF
ORTHOPEDIC SURGERY

SPECIAL ARTICLES

Problems of Aging

J. Campbell Cantrill, M.D.*

"HONOR thy father and thy mother; that thy days may be long in the land which the Lord thy God giveth thee." Have we forgotten this commandment? Have we pushed our medical creeds aside or repressed them?

The 1970 census aptly demonstrates the necessity of medicine and the church to deal immediately and effectively with the problems of physiological aging. Those in the "over 65 group" represented approximately 20% of the population, but with the increasing pressure to define the aged as those with a chronological age of 62—the percentage would be more properly 25% of the entire population. It has been statistically computed that if a cure for cancer were found now it would only increase our longevity by one and one half years. If the cures for all cardiopulmonary and neoplastic diseases were found our life expectancy would be increased only 10 years. By the year 2000, the number of those over 65 years of age will approach between 20 and 30 million people. In the Episcopal Church alone, it has been estimated that 20% of communicants are over 65 years of age (700,000). Less than one half of those in that age group are attending church services.

It is felt that the Medicine and Religion Committee of the AMA and KMA should stimulate and encourage the establishment of medical and spiritual ministries to the aging at all levels of medical practice. The physicians should assist the churches to find meaningful ways to utilize the talents, energies and resources of aging and retired persons themselves. The American Medical Association has recognized this growing aging phenomenon, and at present is very active in attempting to solve many of those difficult problems. Certainly at the State level each physician in the Commonwealth has encountered this aging problem almost daily.

So important is the subject that a White House Conference on Aging was called for November, 1970. In addition, the AMA House of Delegates has stated "it is incumbent on organized medicine that proper emphasis be placed on improving and maintaining the health of the aging." The AMA has adopted and is implementing no less than 10 policy statements "to strengthen the means of older people for independent living and the improved use of their talents, to lessen their isolation, to increase their participation in family and community life." Aging has never really been separated from organic illness. It should be.

Just what are the problems of aging?

1. **Prejudice:** Society categorizes the elderly with other depreciated groups but our prejudice is even greater. The attitude that they are worthless is woven tightly into the fabric of society. Even the elderly share this prejudice because they, as young people, became imbued with the same prejudice against their elders. These negative feelings about themselves debilitate them both psychologically and physically, but this is often the aging individuals' response to the expectations of society.

2. **Retirement:** Biological age, not, chronological age, should be used as a criteria in deciding when a person should retire. Retirement, like the birth of a child, death of a loved one, departure or marriage, is a major crisis in a person's life. But it is a crisis which the person is poorly equipped to resolve, because society doesn't recognize it as a crisis and so offers no help. At births, deaths, marriages, there are supportive rituals and customs that activate an interpersonal relationship between relatives and

*KMA Trustee, Ninth District. Chairman, KMA Committee on Medicine and Religion. Member, AMA Committee on Medicine and Religion.

friends and the person in crisis. But at retirement there is sometimes only a rather clumsy party that thinly disguises the ill-ease of all involved. With most crises, the attitude is, "We have gotten through this, now let's continue with life"; but at retirement the retiree is now expected to sit around and consider his life to be essentially over, a very debilitating attitude. The high incidence of illness precipitated at retirement testifies to the faulty handling of this crisis event. A high percentage of suicides occur in the over-60 age group.

3. **Social Isolation and Integration:** It would appear that in general parents should not live with their children because it leads to excessive anguish in both parents and children and restricts all the persons involved, young and old, from living their own lives. This may vary from culture to culture, but congregate living, where the older person is provided not only living space, but also his meals, seems to be a good solution. The church and various social services are also more easily available to a group clustered in a congregate living facility. These congregate living facilities should not be isolated, but have contact with the very young since the rapport between these groups, older people and children, is often quite genuine.

4. **Over-protection (Fear-Guilt Reaction):** Many unnecessary limitations of activity are placed upon the elderly. Those who care for them are afraid for the aging person to go downtown alone, fearing that he "may have a heart attack or fall and break a hip." Some aging patients would rather die in unrestricted activity than to die in bed. This includes sexual activity which Masters and Johnson have found to be prevalent in persons of 75 years.

Most aging patients are forced into isolation since they can no longer drive and are hesitant to ask others for transportation. They remain alone and reclusive. Some cannot negotiate the steps of office buildings or public businesses without assistance. Some cannot see well in theaters or churches with poor lighting nor hear well in assembly areas with poor acoustics. Provisions are not much in most public buildings for the aging. Many do not attend cultural events because reduced income makes it impractical to spend their meager income for the price of admission. Depression increases and they become more isolated and reclusive.

5. **Home or Nursing Home:** Several problems are introduced when a patient is cared for in a nursing home rather than his own home. The strange environment may impair the patient's sense of personal identity and his reality-testing ability, causing at least temporary increase in agitation and confusion. The nursing home may engender feelings of helplessness and inappropriate dependency, if more is done for the patient than is actually necessary. The lack of opportunity to carry out familiar activities and usual sources of satisfaction may add to the patient's reaction to his progressive incapacitation.

All of these factors suggest obvious preventative measures. A more complex problem associated with nursing home care is that of the family's guilt over "putting away" the patient. Such feelings have some basis in fact but are frequently compounded by the patient's confused inability to understand and to plan meaningfully; and by the emotional tensions between family members which may have little to do with the patient per se. Family guilt should be anticipated and can be modulated or prevented by the physician. He should suggest and arrange discussions between the patient and responsible family members as far in advance as possible of the actual time when transfer will be necessary. A more rational acceptance of this eventuality by all concerned can be accomplished at a time when judgements are influenced less by the severity of a chronic illness or by the urgency of deciding about immediate nursing home placement. Family guilt and the patient's sense of abandonment can be offset by the physician's suggesting a regular arrangement of visits by family, friends, clergymen, and, of course, himself.

Nursing homes obviously vary in their quality, and patient neglect certainly may occur in the poorer-caliber homes. However, there are certain advantages of nursing home care to both the patients and the physicians to involve resources outside of the traditional doctor-patient relationship. In addition to nurses and social workers, it may be nesessary for the physician to involve the patient's family and friends, community agencies, lawyers and cler-

gymen in the comprehensive care of his patient. Unfortunately, most physicians are neither experienced in sharing medical responsibility nor trained to act as coordinator of a multidisciplinary treatment program.

Early in the chronic illness, there may be great uncertainty, causing the patient and family to ask, "when will it end?" After a variable period of time, uncertainty gives way to hopelessness and the question becomes, "will it ever end?" To prevent these maladaptive attitudes, the physician must maintain an optimistic relationship with the patient in order to encourage him to trust and to strive for health and usefulness.

The physician and clergyman should interest themselves in the improvement of patient care in all nursing homes, in bringing the substandard homes up to higher levels.

As compared to the White House Conference on Aging 10 years ago, the delegates to the 1970 White House Conference are seeking the opportunity to make themselves useful and to help others. The church and the medical profession should develop a concern about employment and retirement. "To keep a person occupied and busy is to prevent him from having disease entities that occur when enforced idleness exists," says Frederick Swartz, M.D., Chairman of the AMA Committee on Aging. There will be no diminution of the problems of the aging in the future.

In summary, those on the Committee on Medicine and Religion present the problems of aging and suggests that every physician involve himself at the local, county and State Association levels in the following ways:

1. Compassionate understanding of your aging patient.
2. Seeking legislation to improve the quality of care in nursing homes.
3. Exploring the possibilities of establishing congregate living facilities to improve self care and independence of the aging.
4. Sponsoring and promoting senior citizens organizations.
5. Exploring the concept of establishing day care centers for children in the homes of the elderly.
6. Assisting and promoting already existing programs, such as the meals-on-wheels program, the telephone reassurance program, transportation services for the aging, home health care services and vacation and camping experiences for the aging.
7. To cooperate and participate with the local medical and ministerial associations as physician-clergy teams in the Someone Cares Program.

What Is Happening to Health Care Costs?†

Chris N. Theodore*

IN fiscal 1971 aggregate national health expenditures were $75 billion. This reflects the dramatic rise in health care costs in recent years. In fiscal 1971 those costs were three times greater than in fiscal 1960 and five times greater than in fiscal 1950.

Growth in the relative share of health care expenditures to the Gross National Product (GNP) has been equally dramatic. In fiscal 1950 health care expenditures represented some 4.6% of the GNP; in fiscal 1960 they were 5.3%; in 1970 they exceeded 7%, and in 1971 reached 7.4%. Some of the sharp increases during the 1960's were due to price. Price increases alone accounted for approximately 50% of the rise in expenditure.

Despite its limitations, the most accepted indicator of price changes in the United States is the Consumer Price Index (CPI). Since 1960:

the "all items" component of the CPI has increased 37%;

the "all services" component has increased 54%;

†*Presented at the KMA Interim Meeting, April 14, 1972, in Somerset*

**Director, Center for Health Services Research and Development, American Medical Association*

the "medical care" component has increased 62%;

the "physicians' fees" component has increased 69%, and

the "daily hospital service charges" component has increased 186%.

By these measures, or by almost any others, health care is one of the most important sectors of the economy. Its size and rate of growth in recent years have resulted in an enormous volume of literature, statistics and discussion as to whether the health sector is performing well or poorly, and what should be done to solve its various problems.

As is usually the case with controversial issues the more that is said and published the more confused the overall picture becomes. No topic has been quite as widely discussed, and confused, as the subject of health care costs. This morning we will try to clarify some of the salient points relating to this nation's experience with health care costs, and try to put the subject into some sort of perspective.

What **is** happening to health care costs? Before we attempt to answer that question, we should define two terms that we have already used: expenditures and prices. These are two separate concepts and the distinctions between them are not always understood. Much of the confusion that exists over health costs comes from using these separate concepts interchangeably. While they are related, they are in no way synonymous.

Expenditures refer to the amount of money spent on health care, and is a result of the price of each unit of service that is purchased times the number of units that are purchased. It is a composite measure that can be affected by either the price of services, the volume of services delivered, or both.

Prices are the per unit charge placed on a particular service. Price is important because it is not only one of the two basic factors in determining expenditures, but is also the fulcrum upon which the traditional demand-supply balance depends.

Now, we do not want to be accused of adding to the general confusion regarding health care costs. Let us make this clear: Americans are spending more and more on health care each year. This however, is not necessarily bad. Health care is a desirable service and Americans live in what has been characterizd as the "world's first service economy."

Let's look briefly at some of the factors that affect health care expenditures. Since only about half of the increase in expenditures can be accounted for by price increases, the rest must be due to an increased volume of services rendered. The simple fact is that the American public has been demanding more and more health care. It might be of interest therefore, to look at some of the factors behind this increased demand.

We are all familiar with some of the more commonly discussed reasons:

—Population growth has stimulated demand directly. There are more people to keep healthy than there use to be.

—Consumers have changed their priorities and preferences, and health services once considered luxuries are now considered necessities.

—The general educational level of the population is increasing and along with it is an increased awareness and desire for health and health services.

—The financial ability to purchase health services has increased, both through higher incomes, expanded insurance coverage and the existence of government programs.

These are the most familiar sources of increased demand. But there are others that are not so often discussed.

First, expectations of what the health system can accomplish are growing rapidly. There is a growing feeling among the public that each member of society is entitled to the highest quality, most comprehensive and most sophisticated service in existence. Any effort short of that is intolerable. In addition, they expect the efficacy of such care to be very high. A medical effort that fails is no longer looked upon in terms of "the doctor did his best" or "it was God's will" but rather it is looked at as grounds for legal action against the physician or the hospital.

Secondly, illness and disease patterns are changing as the population changes. In response to changing age/sex/race distributions in the population, and the changing pace of society, chronic diseases, mental and emotional disorders, and congenitally acquired diseases are becoming more prevalent. These diseases

demand much more attention than do the short term acute conditions.

Thirdly, the public still wants personal service from health providers. New technology is fine and providers are expected to work wonders with it, but they are to do so on a very personal basis. This has forced the delivery of care to be planned at the local level. Attempts to automate or provide services on a mass basis have not been too successful or well received except where the personal aspects of health delivery have been retained. These and other underlying forces have kept a steady pressure on the demand for health services and have resulted in ever-increasing expenditures.

We have gone to some lengths to discuss demand, because demand has a direct effect on both of the primary factors that influence expenditures—the volume of services delivered, and the price of these services. It is important that we recognize the impact of demand on expenditures because all available indicators tell us that not only has demand increased very rapidly over the past several decades, but, more importantly, it will continue to increase for some time to come. This realization is central to meeting the basic objective of the health care industry.

We have a three-part objective to:

1. Provide maximum access to care for all people while
2. Maintaining high standards of quality, and
3. Keeping costs under control. Obviously cost in this context refers to prices.

This three-part objective presents a real challenge to organized medicine because it calls for an increase in the volume of services available, or, in other words, an increase in supply.

Thus, we can expect demand to keep on increasing, and there is very little that can be done about it except to try to increase supply to meet the demand. Increasing supply, however, presents us with additional problems. Supply is directly dependent on the availability of resources. Too few resources in the wrong proportions, in the wrong places, results in a supply/demand imbalance. We are experiencing such an imbalance now, and have been for some time.

There is a shortage of health resources in this country, and this basic shortage is further compounded by a maldistribution of services both in terms of types of services and their location. Since health care is a labor intensive industry, these resources consist primarily of manpower. Hence, the problem to be solved reduces to increasing the volume of services by increasing manpower and by increasing their productivity.

As we try to increase supply, it will be important to monitor our progress. To do so, we will look once again to the financial indicators —in this case, price. As the regulator of supply and demand, price is naturally sensitive to changes in the balance between supply and demand. As measures are taken to bring supply back into balance with demand, upward pressures on prices will be relieved and prices will become more stable.

Now, to meet that optimistic goal we must ask: What can be done to increase the supply of services available? Obviously, the most direct way of increasing the supply of services is to increase the number of people qualified to provide those services. An expansion of the medical education system is, thus, necessary. This need has been recognized for some time, and some progress has been made—but not enough. Some current efforts to expand the number of medical graduates are encouraging.

—Innovations in curriculum promise to shorten the training time without reducing the quality of training. One-third of our medical schools have experimented with shortened curricula and have found their experiments encouraging.

—The Medical Education system itself is expanding. Many schools are adding facilities in order to accommodate larger student populations, and the number of schools are increasing. In 1965, for example, there were 88 medical schools. Now there are 108, with some still in various stages of development. It is estimated that by 1980, there will be 120 schools in this country. In addition, training programs for allied health personnel have been expanding.

These efforts are impressive, yet, they are not enough, and a continuing effort will be required to help bring supply into balance with demand and keep it that way.

A second approach to increasing the supply of services is by making the existing resources more productive. In recent years, this approach

has become popular, and the suggestions as to how this should be accomplished have been many and varied.

Most of you probably have a pretty good idea of what an HMO is; how it would operate; and what the effect of wide-scale existence of HMO's would be. Yet, if I were to ask 10 of you to give me a concise description of these three items . . . I would probably get 10 different answers. And they likely would generate a discussion that could last until next week and still not arrive at conclusion. What I am saying is that everyone knows what an HMO is, but then again, no one knows what an HMO is. Hence, whether it can increase the supply of services or reduce the pressure on health care costs is not known.

The conclusion one reaches in considering these various approaches to increasing the supply of services and relieving pressure on costs is that experimentation, demonstration and evaluation are needed. What is the role of organized medicine in such experimentation? As we have seen, there are several rather imposing problems facing medicine today. The public is demanding unrestricted access to the best quality care that can possibly be produced, at the lowest cost.

The response to these demands from the private sector and the public sector has been impressive. Hence, the role of organized medicine is to rise to the challenge and provide leadership to this movement that seems to be going all directions at once.

Yesterday, Joe Miller gave you his thoughts on the implications of the foundation movement. He congratulated organized medicine for the leadership role that the foundation movement has helped to create. And he added a word of caution concerning the HMO experimentation that some foundations have undertaken.

I echo this word of caution to "go slow" but add that by all means **go**. If anyone is in a position to experiment with and properly evaluate the delivery system including the HMO concept, it is organized medicine at the grass roots level. It is essential that foundations such as the Kentucky Foundation for Medical Care become involved in experimentation. Such participation, of course, does not guarantee that the conclusions and recommendations resulting from organized medicine's evaluation efforts will be totally adhered to. But it is worth a good try.

What is happening to health care costs?

We have perhaps, digressed from that subject to a certain extent this morning. However, it was necessary—Because what is happening to health care costs is only a reflection of what is happening to health care delivery in general. And a look at one without a look at the other would not mean very much.

It should be re-emphasized that organized medicine must be involved in facing the challenge that the American public has put forth. To be involved, it must be strong enough to command listeners when it speaks. Organized medicine must speak for the entire profession, and hence, our priorities should be to make every physician a member of his county, state and specialty society and a member of A.M.A. We must experiment, demonstrate and evaluate, and then we must speak.

When organized medicine speaks with one voice through a unified membership the public will listen.

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EDITORIALS

Fear—and Breast Cancer

IN 1900 the leading causes of death in this country were:

1) Tuberculosis
2) Pneumonia
3) Diarrhea and Enteritis
4) Heart Disease
5) Cerebral Hemorrhage
6) Nephritis
7) Accidents
8) Cancer
9) Bronchitis
10) Diphtheria

By 1968 a major change in this list had occurred, as infectious diseases responded to advances in treatment and to improved public health measures. Leading causes of death, 1968:

1) Heart Disease
2) Cancer
3) Cerebral Hemorrhage
4) Accidents
5) Influenza and Pneumonia
6) Diseases of early infancy
7) Diabetes
8) Arteriosclerosis
9) Cirrhosis of the liver
10) Emphysema

Today, heart diseases, cancer, and vascular diseases account for almost two-thirds of all deaths in the U.S.

Of all the major causes of death, only heart disease and cancer have shown increased death rates since 1900. In the last ten years, the rate of death from heart disease has leveled off, leaving cancer as the only major cause of death which continues to pursue a slow, steady increase. In men, the death rate from cancer of the lung is now 18 times what it was 40 years ago (in women, a sixfold increase in the same period). Lung cancer is now both the leading cause of cancer deaths among men, and the leading cause in our total population, as well[1].

(The importance of lung cancer, with its 70,000 annual deaths in this country, is thus quite apparent, and it's not my purpose at this time to discuss it in any greater detail. Suffice it to say that most experts feel this is largely a preventable disease, with the means of prevention—elimination of cigarette smoking—readily at hand.)

In women, however, cancer of the breast is the number one killer among malignancies (now 32,000/year), and has been for 25 years. The death rate for this tumor has remained just about the same for the last 40 years, in spite of more patient education, improved surgical training, and all the advances in anesthesia, antibiosis, megavoltage radiation therapy, chemotherapy, etc. Why?

The problem doesn't lie with treatment, really. While many modes of therapy are currently proposed, most physicians move promptly, on detection of a bona fide mass, toward diagnosis and some reasonable treatment. Granted, even our statistically best method of treatment (radical mastectomy) leaves much to be desired—we have nothing available to better its results. What we **can** do, though, that **will** considerably improve the outcome of this disease, is to decrease the period of delay on the part of many patients. Too many women are quite literally afraid to bring a newly found breast lump to the attention of their doctors—until they are forced to, by its constant growth, at a time too late for possible cure.

What are these women afraid of? Pretty obviously, the least they feel they'll face is a surgical biopsy, with its accompanying discomfort, risk of anesthesia, expense, and resultant "scarred breast". If the tumor is found to be malignant, the patient faces the loss of a breast, with its concomitant sexual and emotional disturbances, fear of a swollen arm, and a very real concern about an early and un-

1. *Silverberg & Holleb, "Cancer Statistics 1972": Ca.-A Cancer Journal for Clinicians, Vol. 22, No. 1, Jan/Feb, 1972.*

comfortable death. Add to these the illogical but very strong belief in many minds that cancer = death, and it's small wonder that too many women reason "If this lump isn't cancer, I'm all right; if it is cancer, the treatment is dreadful, and the odds on a cure are nil". Thus they procrastinate, and lose the one chance for a cure they had—early diagnosis and treatment.

We need, I believe, to make breast lumps less frightening things. As physicians, we know that the majority of breast masses we see are benign, and we need to get this idea across to our patients. One of the methods which will help a great deal to achieve this is for more of us to adopt aspiration* of breast cysts as one of our standard in-office procedures.

Aspiration has many advantages—it is quick, almost painless, inexpensive, suitable for multiple cysts, and is repeatable. Its only disadvantage lies in the possibility it might lead us to overlook the presence of cancer. This will not occur if we biopsy all persistent, non-cystic masses, if we bear in mind that bloody fluid from a cyst may indicate cancer in the cyst wall, and if we insist on adequate follow-up visits. Cytology on the fluid aspirated need not be done. If we follow these guidelines, we can eliminate the worry and the expense of in-hospital biopsy for many women, and thereby, hopefully, make early visits to the physician more acceptable for all. Those of us who've been using this procedure for many years can attest to the gratification on the part of both patient and physician when aspiration rapidly and easily proves the suspect lesion to be benign, and eradicates it, both in one short maneuver.

If you're using this procedure, be sure your patients know about it—they'll spread the word. If you're not using it, try it. We may save more lives overall, and that's the name of the game.

WHj

* (*25-gauge short needle, small disposable syringe, no anesthesia needed.*)

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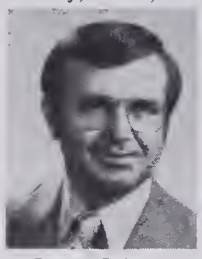
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Charles C. Smith, Jr., M.D., Scientific Editor
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ORGANIZATION SECTION

Drs. Rainey and Holloway Elected by KMA House

The KMA House of Delegates chose Fred C. Rainey, M.D., Elizabethtown, as President-Elect for the 1972-73 Associational year at its September 20 session. Elected as Vice-President was James B. Holloway, M.D., Lexington.



Doctor Rainey

Lee C. Hess, M.D., Florence, was installed as President of KMA at the President's Luncheon on September 20. He succeeded John S. Harter, M.D., Louisville.

A family physician who has practiced in Elizabethtown for 15 years, Doctor Rainey is currently the Chairman of the KEMPAC Board of Directors and has served as a former Chairman for State Affairs of the KMA Legislative Activities Committee. He is a member of the Kentucky Academy and the American Academy of Family Physicians.

Doctor Holloway, Associate Clinical Professor of Surgery at the University of Kentucky College of Medicine, is the current President of the Fayette County Medical Society. He served as Chairman of the KMA Hospital Committee from 1958 to 1971. He is a member of the Southern Surgical Association and the Kentucky and Lexington surgical societies.



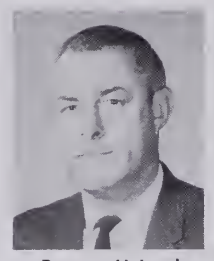
Doctor Holloway

Re-elected as Delegate and Alternate Delegate to the AMA were J. Thomas Giannini, M.D. and Charles G. Bryant, M.D., both of Louisville. Elected to fill the unexpired terms of Doctor Rainey and W. Donald Janney, M.D., Covington, were William W. Hall, M.D., Owensboro and Thomas L. Heavern, Jr., M.D., Highland Heights.

Board Elects McLeod, Cassady As Chairman, Vice-Chairman

Robert N. McLeod, Jr., M.D., Somerset, was made Chairman of the KMA Board of Trustees at its first meeting of the Associational year, September 21. Chosen as Vice-Chairman was Ballard W. Cassady, M.D., Pikeville

Doctor McLeod, Trustee from the Twelfth District, succeeds David A. Hull, M.D., Lexington. A pediatrician, Doctor McLeod served as Vice-Chairman of the Board from 1970-72. He is a Past President of the Pulaski County Medical Society and the Kentucky Pediatric Society and past Chairman of the



Doctor McLeod



Doctor Cassady

Kentucky Chapter, American Academy of Pediatrics.

A surgeon, Doctor Cassady has been on the Board of Trustees since 1966. He is President-Elect of the Kentucky Chapter, American College of Surgeons and serves as Chairman of the Committee on Applicants of District 2 for the national chapter. He also belongs to the Kentucky Surgical Society and the Southeastern Surgical Congress.

Newly elected members of the Board are: Edward N. Maxwell, M.D., Louisville, Fifth District, succeeding John S. Llewellyn, M.D., Louisville; Earl B. Rynerson, M.D., Winchester, Eleventh District, succeeding Douglas H. Jenkins, M.D., Richmond; and Harold L. Bushey, M.D., Barbourville, Fifteenth District, succeeding E. C. Seeley, M.D., London.

Re-elected to a three-year term were: Paul J. Parks, M.D., Bowling Green, Sixth District, and Carl J. Brueggemann, M.D., Covington, Eighth District.

Alternate Trustees newly elected to the Board are: Joe M. Bush, M.D., Mt. Sterling, Eleventh District, and Walter H. Stepchuck, M.D., Harlan, Fifteenth District.

Lloyd Yopp, M.D., Louisville, was re-elected as an Alternate Trustee from the Fifth District, as well as Alternate Trustees Carlisle V. Dodson, M.D., Russellville, Sixth District, and Robert C. Smith, M.D., Newport, Eighth District.

House of Delegates Elects Nominating Committee

The KMA House of Delegates elected the members of the 1973 Nominating Committee at its final session September 20. This committee is entrusted with the responsibility of presenting a slate of candidates for all elective offices within the structure of the Kentucky Medical Association to the House of Delegates at the 1973 Annual Meeting.

The committee members chosen were: William E. Becknell, M.D, Manchester; Glenn W. Bryant, M.D., Louisville; William J. Sandman, M.D., Louisville; John E. Trevey, M.D., Lexington, and James O. Willoughby, M.D., Bowling Green.

A chairman will be selected at the first meeting of the committee during the Interim Meeting, March 29-30, at Lake Barkley Lodge, Cadiz.

Senatorial Candidates Address 10th KEMPAC Seminar

The Tenth Anniversary Celebration of KEMPAC held September 18 at Stouffer's Louisville Inn featured the two Democratic and Republican candidates for the United States Senate, Walter "Dee" Huddleston (D-Elizabethtown) and Louie B. Nunn (R-Glasgow).

Their topic, "Campaign '72," was well received by a large audience of physicians and guests, according to Fred C. Rainey, M.D., Elizabethtown, KEMPAC Chairman.

Hoyt D. Gardner, M.D., Louisville, who is the Chairman of the AMPAC Board of Directors, reviewed the activities of AMPAC and KEMPAC. Doctor Gardner, a former Chairman of KEMPAC, is the first Kentuckian to serve as AMPAC Chairman.

Several of the Kentucky candidates for the U.S. House of Representatives were among other guests present.

The two guest speakers discussed several medically-related topics, including health insurance plans, tax reform and drug abuse.

Medical Licensure Board Holds Second Meeting, Nov. 9

By the time the November issue of *The Journal of KMA* is printed, the new Board of Medical Licensure will have held their second full meeting.

The Board has been extremely busy dealing primarily in the area of new regulations, changes in requirements for foreign medical graduates and in preparation for the next examination.

The FLEX examination will be given on December 5, 6, and 7, 1972, at the Seelbach Hotel in Louisville. If additional information, concerning fees, time of exam, etc., is required please contact the Board of Medical Licensure at 3532 Ephraim McDowell Drive, Louisville, Kentucky 40205. Phone (502) 456-2220.

The Board at their September meeting, decided to defer annual registration at the present time. Kentucky physicians are asked to disregard the October 1 expiration date on their current registration card. All physicians will be notified when registration is due.

Auxiliary Elects Mrs. Pearson, Installs Mrs. Schafer

Mrs. William Pearson, Owensboro, was chosen President-Elect of the Woman's Auxiliary to the KMA during the Auxiliary Golden Anniversary Convention, September 18-20 in Louisville. Installed as President for the 1972-73 Associational year was Mrs. George Schafer, Louisville. Mrs. Schafer succeeds Mrs. David Stevens, Lexington, who presided at the meeting.

Vice-Presidents elected at this year's session were: Mrs. Edwin Davis, Paducah (1st); Mrs. Thomas Wilson, Somerset (2nd); Mrs. Ben Crawford, Lexington (3rd), and Mrs. Donald Stephens, Cynthiana (4th).

Other newly elected officers are: Mrs. John Ashworth, Ashland, Recording Secretary; Mrs. Bernard Schoo, Louisville, Corresponding Secretary; Mrs. Charles Severs, Louisville, Treasurer, and Mrs. James Embry, Paducah, Parliamentarian.

Loman C. Trover, M.D., Madisonville, was named President-Elect of the American Association of Medical Clinics. Doctor Trover was the second scholarship recipient of the Rural Kentucky Medical Scholarship Fund in 1947.

Fifty-five Physicians Attend KMA Orientation Program

The Thirteenth KMA Orientation Program held September 20 was attended by 55 physicians from throughout Kentucky, according to Wyatt Norvell, M.D., New Castle, Orientation Committee Chairman.

Held on a voluntary basis for the first time, this year's program was redesigned to make it more informative to new members of the Association.

Physicians who attended the September 20 session are listed below. If you were present and your name is not listed, please notify the KMA Headquarters Office.

Ayten N. Aleem, M.D., Lexington
Raoul Alonso, M.D., Louisville
Ruben Altman, M.D., Madisonville
Orson Arvin, M.D., Mt. Vernon
Emilio Blanco, M.D., Glasgow
John E. Boso, M.D., Lexington
Paul T. Brizendine, M.D., Louisa
John L. Bunting, M.D., Louisville
Ernest W. Chick, M.D., Lexington
Enedino R. Corales, M.D., Lexington
James P. Crews, M.D., Cave City
R. Ronald Cribbs, M.D., Corbin
Robert T. Crosby, M.D., Bowling Green
Charles K. Davis, Jr., M.D., Paducah
M. Allen Dawson, M.D., Lexington
Ronilo D. Diaz, M.D., Greenville
Marcus L. Dillon, M.D., Lexington
Grace G. Eddison, M.D., Paris
James A. Ewing, M.D., Campbellsville
Michael B. Flynn, M.D., Louisville
James G. Gay, M.D., Lexington
David Goldblatt, M.D., Louisville
German Gutierrez, M.D., Lexington
Patrick Hagihara, M.D., Lexington
Larry J. Hall, M.D., Elizabethtown
Russell A. Hibbs, M.D., Henderson
Prospero Ishkanian, M.D., Louisville
Thomas M. Jarboe, M.D., Lexington
Robert L. Jetton, M. D., Louisville
William M. Johnson, M.D., Pikeville
James C. King, Jr., M.D., Paris
Edward C. Lauber, M.D., London
Carl W. Liebert, Jr., M.D., Louisville
James W. Morris, M.D., Burkesville
Michael S. Nall, M.D., Louisville
P. A. Natividad, M.D., Cloverport
Clem E. Nichols, M.D., Louisville
W. Neil Padgett, Jr., M.D., Owensboro
Robert A. Padgett, M.D., Elizabethtown
Richard S. Pataki, M.D., Louisville
William Powers, M.D., Hawesville
Harold Lee Reams, M.D., Lexington
Pedro M. Ruiz, M.D., Lexington
James R. Rutledge, M.D., Bowling Green
Walter P. Savage, M.D., Louisville
Beverly Ann Smith, M.D., Richmond
Geraldine W. Spurlin, M.D., Richmond
Charles L. Stephens, M.D., Ft. Thomas
Harry C. Stephenson, M.D., Louisville
David S. Swan, M.D., Lexington
Laurie R. Thomas, M.D., Lexington
Robert R. Wahl, M.D., Louisville
Philip G. Weiler, M.D., Lexington
Leo J. Wine, M.D., Louisville
Jerzy Wysocki, M.D., Lexington



The recipients of the KMA awards for 1972 are pictured with Douglas E. Scott, M.D., Lexington (center) Awards Committee Chairman, following the President's Luncheon, September 20. N. Lewis Bosworth, M.D., Lexington (left) received the Distinguished Service Award and Mr. J. Ed McConnell, Louisville, (right) the Kentucky Medical Association Award.

KMA Honors Dr. N. L. Bosworth, Mr. McConnell With Awards

N. Lewis Bosworth, M.D., Lexington and J. Ed McConnell, Louisville, were KMA awards recipients for 1972. The Distinguished Service Award was presented to Doctor Bosworth and the Kentucky Medical Association Award to Mr. McConnell at the President's Luncheon, September 20. Douglas E. Scott, M.D., Lexington, Chairman of the Awards Committee, made the presentations.

Selected for his outstanding service to the Association and to the medical profession, Doctor Bosworth, a urologist has served as Chairman of the KMA Judicial Council, the Orientation Committee, the Senior Day Committee and has been a member of the Building Committee. He is a Past President of the Fayette County Medical Society and the Kentucky Urological Society. Presently he is Associate Clinical Professor of Surgery at the University of Kentucky Medical Center.

Mr. McConnell, who is President of Kentucky Blue Cross Hospital Plan, Kentucky Physicians Mutual and Delta Dental Plan, was honored for his outstanding accomplishments in the field of health and medical care as a layman. He is a director of the National Association of Blue Shield Plans and was recently appointed to the Board of Governors of Blue Cross Plans. As President-Elect of the Kentucky Chamber of Commerce, Mr. McConnell is well known for his many civic activities.

Other highlights of the President's Luncheon included the humorous entertainment of Mark Russell, political satirist from Washington, D.C., and the installation of Lee C. Hess, M.D., Florence, as President of the Association.

Drs. Swigart, Anderson Named As Interim Deans at U of L

Richard H. Swigart, Ph.D. and William H. Anderson, M.D., were recently appointed as interim deans of the University of Louisville School of Medicine to replace Douglas M. Haynes, M.D.

The U of L Board of Trustees named Doctor Swigart as acting dean and Doctor Anderson to serve as associate dean and chief of staff of Louisville General Hospital. Both will serve until a permanent dean is appointed.

Doctor Haynes, who announced his resignation earlier this year, remained as dean until the interim appointment was made. He will resume his duties as Professor of Obstetrics and Gynecology at U of L.

A graduate of the University of Minnesota, Doctor Swigart is a Professor of Anatomy and has been serving as assistant dean for student affairs since June, 1969.

Nationally known for his work in the area of lung diseases, Doctor Anderson has been chief of the U of L Pulmonary Section for nine years. He also served as acting chairman of the Department of Medicine from August, 1971 until August, 1971.

Correction

The "Open Letter From Blue Shield" in the October, 1972, issue of The Journal of KMA, carried a mistake in the amount of payment provided under Surgical-Medical Care to Kentucky state employees. This section should have read: Schedule D Blue Shield with indemnity for surgical or obstetrical care, up to **$405.00** maximum.

COMPARATIVE REGISTRATION FIGURES

KMA Annual Meeting

	Lexington 1963	Louisville 1964	Louisville 1965	Louisville 1966	Louisville 1967	Louisville 1968	Louisville 1969	Louisville 1970	Louisville 1971	Louisville 1972
KMA Members	865	924	1172	1016	957	1009	1056	1013	1186	940
Guest Physicians	141	157	138	195	152	153	149	130	149	142
Interns-Residents	69	108	132	121	94	103	95	101	70	119
Medical Students	59	128	193	209	222	185	218	245	233	234
Registered Nurses	31	34	27	33	24	42	27	48	30	41
Exhibitors	212	297	297	312	272	256	305	280	269	241
Guests	132	125	172	126	115	324	339	379	356	364
Technicians Office Assistants	22	61	55	46	31	29	39	32	36	34
TOTAL ATTENDANCE	1531	1844	2186	2058	1867	2111	2228	2228	2329	2115

Delegates' Actions on 47 Reports and 17 Resolutions Summarized for 1972 KMA Annual Meeting

The House of Delegates of the Kentucky Medical Association reviewed and took action on 47 reports and 17 resolutions submitted to them at this year's Annual Meeting, September 19-21.

A lengthy discussion was held concerning the Judicial Council of KMA and the House approved an addition to the Bylaws to give the House power to ratify or reject "interpretations of the principles of medical ethics as the Judicial Council may propose."

Resolution H, which was passed by the House of Delegates in 1971, was further clarified by the delegates this year for appropriate action.

The House approved a resolution from the KMA Board of Trustees setting forth a provision for "on-call rosters" in every hospital throughout Kentucky that provided emergency services. The resolution also pointed out the need to improve emergency room services whenever possible in all hospitals.

In its previously stated interest in continuing medical education the House passed a resolution directing the Committee on Continuing Medical Education to develop and administer, under the auspices of the Kentucky Foundation for Medical Care, a voluntary self-assessment examination of the basic knowledge considered appropriate for all practicing physicians in the Commonwealth.

The House also passed a resolution endorsing the AMA Medicredit program which has been introduced in Congress (S.987 and H.R.4960). Under this proposed legislation individuals would have available to them insurance protection underwritten by risk-bearing insurance companies that would provide basic health protection and protection against catastrophic illness. This program would also protect the individual's right to free choice of physician.

The House of Delegates reaffirmed the "peer review concept" by passing Resolution A which stated that whenever peer review mechanisms exist, it is essential that third parties make use of them as a primary method of resolving differences prior to threats of litigation.

A resolution regarding the escalating costs of health care was discussed and it was resolved that KMA urge all hospitals in the state to make available to each physician on its staff, at least monthly, a photocopy of the itemized bill of a patient whom he had discharged so that he could become more aware of the costs of the services he prescribed. A copy of this resolution was sent to the president of the staff of each hospital in the state.

A resolution introduced by the Madison County Medical Society concerning the development of professional standards by the National Athletic Trainers Association was passed by the House of Delegates. This is official recognition of NATA certification procedures and recommendation that the Board of Education of the state recommend to local school boards the appointment of certified athletic trainers to work with physicians in the important area of health and supervision of athletes.

A resolution from Campbell-Kenton County Medical Society regarding present admission procedures, discharge procedures and patient placement methods in state mental hospitals was discussed by the House of Delegates. The House passed the resolution which had previously been passed by the Council of the Kentucky Psychiatric Association. Activities concerning implementation of this resolution will be the responsibility of the legislative committee of the Association.

The House approved changes in KMA's Constitution and Bylaws by deleting the section dealing with required attendance at orientation programs by new members. The Orientation Program this year, however, was attended by approximately 50 new members of KMA.

This is a brief summary of some of the points covered during the 1972 Annual Meeting. All of the reports and resolutions acted upon by the KMA House of Delegates will be published in the December issue of The Journal.

KMGA Announces Winners For 1972 Tournament

Sixty-four physicians participated in this year's fall tournament of the Kentucky Medical Golf Association held September 21 at Harmony Landing Country Club, according to Mervel V. Hanes, M.D., KMGA President.

Bernie Sams was the winner of a sudden death playoff having tied with Art Daus for Low Gross-Open with 76. Third place went to Eugene Snowden with a 79.

Low Net was won by Charles Spalding with a net 67. Other Low Net winners were:

Charles Shipp	68	Walter Wilson	73
Henry DeLong	68	William Durham	73
Jim Baker	69	Roger Zwemer	73
Ben Asher	70	Oliver James	73
Charles Huber	71	John Southard	73
John Karibo	72	Robert McGrath	74
Pat Galla	73	Harold Graves	74

Senior Net Division, Low Net winners were Paul Hulett with a 69 and Sam Smith, 73. Longest drive on #15 went to Robert O'Connor; closest to #16, Mark Sexter, and Blind Bogey with a net 74 was won by Tom Stigall.

The KMGA is grateful for the support of its sponsors in this Second Annual Fall Tournament. Special thanks is made to Ted Ottman for his help in the organization and conduct of the Tournament.

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Cal Connell Cadillac
Office Equipment Company
Koster-Swope Buick Imports
Louisville Motors
Montgomery Chevrolet
Blue Grass Motors
Jim Hannan American Motors
Medical Society Business Bureau
Ted Ottman
Alexander Investment Services

Pictorial Summary of 1972 KMA Annual Meeting

On Monday, September 18—meetings of reference committees . . . . .



Five of the seven reference committees that studied and made recommendations to the House of Delegates on 47 reports and 17 resolutions were led by these chairmen: (left to right) Richard B. McElvein, M.D., Lexington; Clinton R. Potts, M.D., Louisville; Glenn W. Bryant, M.D., Louisville; W. Neville Caudill, M.D., Louisville, and Peter B. Bosomworth, M.D., Lexington.

That evening the KEMPAC dinner and seminar . . . . .





U.S. Senate candidates were the featured speakers at the Tenth Anniversary Celebration held September 18. On the left, Walter "Dee" Huddleston (D-Elizabethtown) addresses the audience on "Campaign '72." On the right, Fred C. Rainey, M.D., Elizabethtown, KEMPAC Chairman, presents Louie B. Nunn (R-Glasgow) with a token of appreciation for his participation as Hoyt D. Gardner, M.D., Louisville, AMPAC Board Chairman, looks on.

Guests and Speakers Praise 1972 Annual Meeting

"Thank you very much for the gracious hospitality you and your colleagues extended to me during my recent participation in the program of the Kentucky Medical Association and my pleasant visit to the Bluegrass State."

Gordon K. Danielson, M.D.
Associate Professor of Surgery
Mayo Clinic
Rochester, Minnesota

"My three days as guest of the Kentucky Medical Association's Annual Meeting were most enjoyable. The hospitality was superior. I congratulate you on the efficiency of your State Association."

William T. Satterfield, M.D.
President
Tennessee Medical Association
Nashville, Tennessee

At the President's Luncheon on Wednesday, September 20, the change of office . . . . .



Chairman of the Board of Trustees, David A. Hull, M.D., Lexington (left) administers the oath of office to President of KMA, Lee C. Hess, M.D., Florence, at the close of the President's Luncheon, September 20.



As the first official duty of the new KMA President, Lee C. Hess, M.D., Florence (right) presents outgoing President John S. Harter, M.D., Louisville, a plaque for his distinguished service to the Association.

The House meets, elects new officers that evening (right and below) . . . . .



Upon his election by acclamation as President-Elect, Fred C. Rainey, M.D., Elizabethtown (center) is escorted to the speakers podium by Past Presidents Henry B. Asman, M.D., Louisville (left) and Delmas M. Clardy, M.D., Hopkinsville.



Lee C. Hess, M.D., Florence, KMA President (center) congratulates Fred C. Rainey, M.D., Elizabethtown, on his election as President-Elect. Also elected at the second session of the House of Delegates, September 20, was James B. Holloway, M.D., Lexington (left) who will serve as KMA Vice-President for 1972-73.

Number of Active Physicians in Kentucky Counties Who Are Members of KMA and AMA October 13, 1972

The total number of active Kentucky physicians who are KMA members, as of October 13, 1972, is 2445. Sixty-two counties have 100% membership in KMA and 29 counties have 100% AMA membership.

Membership figures for each county are listed below. **Not** included in the figures, as tallied by the KMA Membership Department, are associate, in-training, retired and emeritus members. Members who have paid 1972 dues, but have since died or left the state, are also not included in the figures.

COUNTIES	Active Physicians	MEMBERS KMA	MEMBERS AMA	COUNTIES	Active Physicians	MEMBERS KMA	MEMBERS AMA	COUNTIES	Active Physicians	MEMBERS KMA	MEMBERS AMA
Adair	7	6	6	Graves*	20	20	16	Menifee	0	0	0
Allen	5	4	4	Grayson	7	6	3	Mercer	9	8	5
Anderson*	4	4	1	Green*	7	7	5	Metcalfe*	2	2	1
Ballard**	3	3	3	Greenup*	10	10	9	Monroe	6	5	4
Barren	18	17	15	Hancock*	2	2	0	Montgomery	10	8	6
Bath	3	2	1	Hardin	28	26	19	Morgan*	3	3	2
Bell	35	28	25	Harlan	43	42	42	Muhlenberg**	13	13	13
Boone	19	18	17	Harrison*	9	9	4	Nelson	9	7	7
Bourbon*	12	12	3	Hart	6	5	5	Nicholas*	3	3	0
Boyd	54	52	46	Henderson	29	27	23	Ohio	7	6	1
Boyle	25	22	10	Henry**	3	3	3	Oldham	8	7	6
Bracken**	2	2	2	Hickman*	2	2	1	Owen**	2	2	2
Breathitt**	3	3	3	Hopkins	53	47	43	Owsley*	2	2	0
Breckinridge**	6	6	6	Jackson**	1	1	1	Pendleton	5	4	0
Bullitt	7	6	4	Jefferson	869	823	596	Perry	17	16	11
Butler**	2	2	2	Jessamine	5	4	3	Pike	42	32	29
Caldwell	5	4	4	Johnson	8	7	7	Powell**	2	2	2
Calloway*	20	20	16	Kenton—See Campbell				Pulaski*	30	30	25
Campbell-Kenton	155	147	102	Knott**	2	2	2	Robertson	0	0	0
Carlisle**	2	2	2	Knox	11	10	6	Rockcastle	3	1	0
Carroll	4	1	1	Larue	3	2	1	Rowan	15	12	10
Carter	2	1	1	Laurel**	9	9	9	Russell**	3	3	3
Casey**	5	5	5	Lawrence	10	9	9	Scott*	5	5	2
Christian	41	40	34	Lee**	1	1	1	Shelby	7	6	6
Clark*	13	13	9	Leslie*	3	3	2	Simpson*	5	5	3
Clay**	5	5	5	Letcher	13	10	10	Spencer**	2	2	2
Clinton	3	2	2	Lewis	3	0	0	Taylor*	6	6	3
Crittenden*	2	2	1	Lincoln	4	3	3	Todd**	3	3	3
Cumberland**	2	2	2	Livingston	5	1	1	Trigg*	4	4	2
Daviess	74	71	58	Logan	10	9	6	Trimble**	1	1	1
Edmonson	2	1	1	Lyon*	2	2	1	Union	6	4	4
Elliott**	1	1	1	McCracken	67	64	61	Warren	55	49	38
Estill*	3	3	1	McCreary**	2	2	2	Washington**	4	4	4
Fayette	397	349	296	McLean*	5	5	0	Wayne*	6	6	3
Fleming*	2	2	0	Madison	29	26	15	Webster	3	2	2
Floyd	15	12	10	Magoffin*	3	3	2	Whitley	21	20	15
Franklin	36	35	19	Marion*	6	6	4	Wolfe**	1	1	1
Fulton**	8	8	8	Marshall*	10	10	9	Woodford*	7	7	2
Gallatin**	1	1	1	Martin**	2	2	2				
Garrard*	3	3	2	Mason*	11	11	10	Totals	2652	2445	1888
Grant**	4	4	4	Meade*	2	2	1				

* 100% KMA
** 100% KMA and AMA

Fellowships Awarded By ACS To 15 Kentucky Surgeons

Fifteen Kentucky surgeons were among the 1,527 physicians inducted as new Fellows of the American College of Surgeons during the Annual Clinical Congress of the group held last month.

To earn this degree a surgeon must fulfill comprehensive requirements of acceptable medical education and advanced training as specialists in one of the branches of surgery.

Those receiving this distinction from Kentucky are: **Louisville:** Walter E. Badenhausen, Jr., M.D.; Arnold M. Belker, M.D.; Patrick R. O'Connor, M.D., and David E. Townes, M.D. **Lexington:** William J. Collis, M.D. and Walter D. Harris, M.D. **Ashland:** Joe S. Wheeler, M.D. and James F. Williamson, M.D. **Madisonville:** Harry O. DeBandi, Jr., M.D. and William H. Klompus, M.D. **Covington:** Robert L. Strawn, M.D. **Danville:** F. A. Martin, Jr., M.D. **Frankfort:** John T. Rawlings, M.D. **Georgetown:** Hugh C. Smith, M.D. **Glasgow:** Fred J. Cecil, M.D.

Annual Seminar To Be Held December 14 at Norton's

The Fifteenth Annual Norton Postgraduate Medical Seminar will be held December 14 at Norton Memorial Infirmary in Louisville and will focus on "Current Management of Difficult Gastrointestinal Problems." E. I. Winkelman, M.D., Cleveland Clinic Foundation, and Charles C. Wolferth, Jr., M.D., Hahnemann Medical School, Kansas City, will be the guest speakers.

Members of the Norton Hospital staff and faculty members from the University of Louisville School of Medicine will also participate in discussions of problems such as malabsorpiton syndromes, vascular disease affecting the intestinal tract, acute and chronic pancreatitis and diverticular disease.

The program is acceptable for five prescribed credit hours by the Kentucky Chapter, American Academy of Family Physicians.

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Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflex esophagitis or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

In theory a curare-like action may occur, with possible loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

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Was Your Delegate Present?
ROLL CALL —
1972 House of Delegates
KMA Annual Meeting

OFFICERS

		First Session	Second Session
Speaker	Richard F. Greathouse	Present	Present
Vice-Speaker	Carl Cooper, Jr.	Present	Present
President	John S. Harter	Present	Present
President-Elect	Lee C. Hess	Present	Present
Vice-President	Carroll H. Robie	Present	Present
Secretary	S. Randolph Scheen	Present	Present
Treasurer	Keith P. Smith	Present	Present
Delegate to AMA	J. Thomas Giannini	Present	Present
Delegate to AMA	John C. Quertermous	Present	Present
Delegate to AMA	David B. Stevens	Present	Present
Alternate Delegate to the AMA	Charles G. Bryant	Present	Present
Alternate Delegate to the AMA	Fred C. Rainey	Present	Present
Alternate Delegate to the AMA	W. Donald Janney	.....	.....

TRUSTEES

District			
First	W. Eugene Sloan	Present	Present
Second	Charles C. Kissinger	Present	Present
Third	Ralph L. Cash	Present	Present
Fourth	W. Bruce Hamilton	Present	Present
Fifth	John S. Llewellyn	Present	Present
Sixth	Paul J. Parks	Present	Present
Seventh	Thomas P. Leonard, Sr.	Present	Present
Eighth	Carl J. Brueggemann	Present	Present
Ninth	J. Campbell Cantrill	.....	.....
Tenth	David A. Hull	Present	Present
Eleventh	Douglas H. Jenkins	Present	Present
Twelfth	Robert N. McLeod, Jr.	Present	Present
Thirteenth	J. Wesley Johnson	Present	Present
Fourteenth	Ballard W. Cassady	Present	Present
Fifteenth	E. C. Seeley	Present	Present

ALTERNATE TRUSTEES

District			
First	Keith E. Ellis	Present	Present
Second	Kenneth M. Eblen	Present	.....
Third	Edwin R. Davis	.....	.....
Fourth	Emmett W. Wood	Present	Present
Fifth	Lloyd G. Yopp	Present	Present
Sixth	Carlisle V. Dodson	Present	.....
Seventh	John P. Stewart	.....	.....
Eighth	Robert C. Smith	Present	.....
Ninth	James L. Ferrell	.....	.....
Tenth	Irving Kanner	Present	Present
Eleventh	Hugh Mahaffey	.....	.....
Twelfth	Paul J. Sides	.....	.....
Thirteenth	Arthur B. Richards	Present	Present
Fourteenth	Jerry D. Fraim	Present	.....
Fifteenth	Harold L. Bushey	Present	Present

PAST PRESIDENTS

Past-President	John C. Quertermous	Present	Present
Past-President	Walter L. Cawood	Present	Present
Past-President	Henry B. Asman	Present	Present
Past-President	George Brockman	.....	.....
Past-President	Robert E. Pennington	Present	Present

DELEGATES

First District

		First Session	Second Session
BALLARD			
CALLOWAY	Donald Hughes	Present	Present
CARLISLE	J. T. O'Neill	.....	.....
FULTON	Glynn F. Bushart	.....	.....
GRAVES	C. Douglas LeNeave	Present	Present
HICKMAN	C. J. Mills	.....	.....
LIVINGSTON	Stephen Burkhart	.....	.....
McCRACKEN	Walter R. Johnson	Present	Present
	David Leeper	Present	Present
	James Seabury	Present	Present
MARSHALL	Keith Ellis	Present	Present

Second District

DAVIESS	John S. Oldham	Present	Present
	William E. Pearson	Present	Present
	Marilyn S. Sanders	Present	.....
	E. P. Stevens (Alt.)	.....	Present
HANCOCK	B. Presley Smith	Present	.....
	William Powers (Alt.)	.....	Present
HENDERSON	Kenneth Eblen	Present	.....
	John McClellan	Present	Present
McLEAN	E. S. Coleman	.....	.....
	W. Gerald Edds (Alt.)	.....	Present
OHIO	Robert E. Norsworthy	Present	Present
UNION	Wallas N. Bell	Present	Present
WEBSTER	Paul M. Taylor	.....	.....

Third District

CRITTENDEN	R. M. Brandon	.....	.....
HOPKINS	Charles R. Fisher	Present	Present
	Kenneth P. Haywood	Present	Present
LYON	Mort H. Moseley	.....	.....
PENNYRILE MULTI-COUNTY SOCIETY			
CALDWELL	Nathaniel Talley	.....	.....
	James S. Brashear (Alt.)	Present	Present
CHRISTIAN	Ben Crowder	Present	Present
	Frank Pitzer	Present	Present
MUHLENBERG	Ronilo D. Diaz	Present	Present
TODD	Henry R. Bell	Present	Present
TRIGG	W. N. Richardson	Present	Present

Fourth District

BRECKINRIDGE	James G. Sills	.....	.....
BULLITT	Stephen Bowen	.....	.....
	P. J. Murphy (Alt.)	Present	Present
GRAYSON	Victor F. Duvall	Present	Present
GREEN	K. J. S. DeSimone	.....	.....
HARDIN	Thomas J. Ferriell, Jr.	Present	Present
	Robert E. Robbins	Present	Present
HART	James P. Crews	Present	Present
LARUE	Marion A. Douglass, Jr.	.....	Present
MARION	Robert H. Wilber	.....	.....
MEADE			
NELSON	Charles B. Spalding (Alt.)	Present	.....
	Henry S. Spalding	.....	Present
TAYLOR	Forest F. Shely	Present	Present
WASHINGTON	Harold Simms	Present	Present

Fifth District

JEFFERSON	John D. Allen, Jr.	Present	Present
	Frank A. Bechtel	Present	Present
	William H. Bizot	Present	Present
	Alan M. Bornstein	.....	.....
	Glenn W. Bryant	Present	Present
	W. Neville Caudill	Present	Present
	James Childers	Present	Present
	Stanley W. Collis	Present	Present
	Eugene H. Conner	Present	Present
	John H. Doyle	Present	Present
	Andrievs J. Dzenitis	Present	Present
	Edward J. Fadell	.....	Present
	William Gillespie	.....	Present
	John N. Goldsborough	.....	Present
	Richard F. Greathouse	Present	Present
	Edward M. Haick	.....	Present
	Charles M. Hargadon	.....	Present
	Sidney G. Marcum	.....	.....
	Robert L. McClendon	Present	Present
	Clyde T. Moore	Present	Present
	Charles Oberst (Alt.)	.....	Present
	Robert G. Overstreet	Present	Present
	C. Kenneth Peters	.....	Present
	Bernard I. Popham	Present	Present
	Clinton Ray Potts	Present	Present
	James F. Rice	Present	Present
	Roger D. Salot	Present	Present
	Bernard F. Sams	.....	Present
	William J. Sandman, Jr.	Present	Present
	Robert P. Schiavone	Present	Present
	Robert M. Senese	.....	Present
	David Shipp	Present	Present
	Edwin P. Solomon, Jr.	.....	Present
	Robert S. Tillett	Present	Present
	John W. Urton	Present	Present
	W. P. VonderHaar (Alt.)	.....	Present
	Lloyd G. Yopp	Present	Present

Sixth District

ADAIR	James C. Salato	Present	Present
ALLEN	Earl P. Oliver	Present	Present
BARREN	Daryl P. Harvey	Present	Present
BUTLER	D. G. Miller, Jr.	.....	.....
CUMBERLAND	James W. Morris	Present	Present
EDMONSON	Sidney E. Farmer	.....	.....
LOGAN	C. V. Dodson	Present	.....
METCALFE	L. P. Emberton	.....	.....
MONROE	James E. Carter	.....	.....
SIMPSON	L. F. Beasley	Present	Present
WARREN	Keith Coverdale	Present	Present
	Harold Keen	.....	.....
	Nelson Rue (Alt.)	Present	Present
	James O. Willoughby	Present	Present

Seventh District

ANDERSON			
CARROLL	Donald F. Roney	.....	.....
FRANKLIN	Dallas Hagg	.....	Present
	William H. Keller	Present	Present
GALLATIN	John D. Fielding	.....	.....
GRANT	Claude C. Waldrop	Present	Present
HENRY	S. Brooks May	.....	.....
	Wyatt Norvell (Alt.)	.....	Present

OLDHAM	John H. Leland	Present	
OWEN	Maurice Bowling	.....	.....
SHELBY	Ronald Waldridge	Present	Present
SPENCER	W. K. Skaggs	.....	.....
TRIMBLE	Carl Cooper, Jr.	Present	Present

Eighth District

BOONE	William R. Yates	Present	.....
CAMPBELL-KENTON	Thomas L. Heavern, Jr. (Alt.)	Present	Present
	Thomas J. Huth	.....	.....
	Alfred A. Jacobs	.....	.....
	Dexter Meyer (Alt.)	.....	Present
	W. Vinson Pierce	Present	Present
	Robert E. Smith	Present	Present
	Fred Stine (Alt.)	.....	Present
	Jerry C. Sutkamp	Present	.....
	R. J. Timmerman	Present	Present

Ninth District

BATH	Robert L. Suttles	.....	.....
BOURBON	Richard Wever	.....	Present
BRACKEN	J. M. Stevenson	Present	Present
FLEMING	R. W. Fidler	.....	.....
	Samuel W. Gehring (Alt.)	Present	Present
HARRISON	Don R. Stephens	Present	Present
MASON	Mitchel B. Denham	.....	.....
	Kelly Moss (Alt.)	.....	Present
NICHOLAS	Allen J. Hamon	.....	.....
PENDLETON	W. M. Townsend	Present	Present
ROBERTSON			
SCOTT	R. Kendall Brown	.....	.....

Tenth District

FAYETTE	Ted D. Ballard	.....	.....
	Leslie W. Blakey	Present	Present
	Peter P. Bosomworth	Present	Present
	Walter R. Brewer	Present	Present
	T. R. Bryant, Jr.	Present	Present
	Winston L. Burke	Present	Present
	William K. Burkhart	Present	Present
	William J. Carey	Present	Present
	Richard D. Floyd	Present	Present
	Richard F. Hench	Present	Present
	James B. Holloway	Present	Present
	Richard B. McElvein	Present	Present
	William P. McElwain (Alt.)	.....	Present
	Carl H. Scott	Present	Present
	John E. Trevey	Present	Present
	James G. Wilhite	Present	Present
JESSAMINE	Dale Dunkelberger	.....	.....
	J. Sankey Williams (Alt.)	Present	.....
WOODFORD	Olson Parrott	.....	Present
	Ben F. Roach (Alt.)	Present	.....

Eleventh District

CLARK	Earl Rynerson	Present	.....
ESTILL	S. G. Marcum	.....	.....
JACKSON	Donald L. Peterson	.....	.....
LEE	Carl W. Noble	.....	.....
MADISON	Dwight L. Blackburn	.....	.....
	Wilbur R. Houston	Present	Present
MENIFEE			
MONTGOMERY	Joe M. Bush	Present	Present
OWSLEY	Arnold Taulbee	.....	.....
POWELL	Sam E. Cecil	.....	.....
WOLFE	Paul F. Maddox	.....	.....

Twelfth District

BOYLE	John M. Baird	Present	.....
CASEY	George W. Sweeney	.....	.....
CLINTON	Floyd B. Hay	.....	.....
GARRARD	B. Glenn Hicks	Present	Present
LINCOLN	E. C. Bowling	.....	.....
McCREARY	Hoover A. Perry	.....	.....
MERCER	John S. Baughman, III	.....	.....
PULASKI	J. Roy Biggs	Present	Present
	W. O. Massey	Present	.....
ROCKCASTLE			
RUSSELL	James E. Monin	.....	.....
WAYNE	Robert B. Breeding	.....	.....

Thirteenth District

BOYD	D. H. Donahoe	Present	Present
	Garner Robinson (Alt.)	Present	Present
	Okey H. Sanford	.....	.....
	Charles A. Webb	Present	Present
CARTER	Harold Shufflebarger	.....	.....
ELLIOTT	Brown L. Adkins	.....	.....
GREENUP	Manuel S. Garcia	Present	Present
LAWRENCE	A. B. Richards	Present	Present
LEWIS			
MORGAN	George R. Bellamy	.....	.....
ROWAN	George Barber	.....	.....

(*Continued on page 892*)

Gantrisin® (sulfisoxazole) Roche® provides your patients with many important advantages:

- high urinary levels
- generally good tolerance
- high solubility at average urinary pH
- rapid absorption
- rapid renal clearance
- high plasma concentrations
- economy (average cost of therapy: less than 6½¢ per tablet)

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Nonobstructed urinary tract infections (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms. **Important Note:** ***In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infections.** Maximum safe total sulfonamide blood level, 20 mg/100 ml; measure levels as variations may occur.

Contraindications: Hypersensitivity to sulfonamides; infants less than 2 months of age; pregnancy at term and during the nursing period.

Warnings: Safety in pregnancy not established. Do not use for group A beta-hemolytic streptococcal infections, as sequelae (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. CBC and urinalysis with careful microscopic examination should be performed frequently.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy or bronchial asthma. Hemolysis, frequently dose-related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; *Miscellaneous reactions:* Drug fever, chills and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Supplied: Tablets containing 0.5 Gm sulfisoxazole.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc
Nutley, N.J. 07110

In *acute, recurrent or chronic* nonobstructed cystitis

THREE OTHER BUILT-IN BENEFITS OF GANTRISIN®

sulfisoxazole/Roche®

3.

High solubility at average urinary pH

Gantrisin's unusual solubility is the main reason for its relatively low toxicity. In both free and acetylated forms, it is highly soluble at urinary pH values of 5.5 to 6.5, so there is no need for prophylactic alkali therapy.

4.

Rapid absorption

Gantrisin reaches its sites of action quickly. Measurable levels of the drug have been found in blood and urine within 60 minutes; in 2 to 3 hours, therapeutic levels usually have been reached.

5.

Rapid renal clearance

Gantrisin's rapid excretion rate is another reason why it is generally well tolerated. Over 50% of a single oral dose is excreted in 8 hours, over 90% in 24 to 48 hours, so there is little risk of hematuria or crystalluria, and anuria is rare. As with all sulfonamides, adequate fluid intake must be maintained. Complete blood counts and urinalyses, with careful microscopic examination, should be performed frequently.

For nonobstructed cystitis due to *E. coli* and other susceptible organisms

begin with

Gantrisin®

sulfisoxazole/Roche®



Usual adult dosage:
4 to 8 tablets *stat*
2 to 4 tablets *q.i.d.*

ROCHE

Roll Call *(continued)*

	Fourteenth District		
BREATHITT	F. C. Lewis	.....	.....
FLOYD	Lowell Martin	Present	Present
JOHNSON	Franklin K. Belhasen	Present	Present
KNOTT	Gene T. Watts	.....	Present
LETCHER	James B. Tolliver	Present	Present
MAGOFFIN			
MARTIN	Raymond D. Wells	Present	.....
PERRY	Donald L. Martin	.....	Present
PIKE	William M. Johnson	.....	Present
	Harvey A. Page	Present	Present
	Fifteenth District		
BELL	Francis Forde	Present	Present
	Emanuel Rader	Present	Present
CLAY	William E. Becknell	Present	Present
HARLAN	Howard L. Elliott	Present	Present
	Walter H. Stepchuck	Present	Present
KNOX	Harold L. Bushey	Present	Present
LAUREL	Edward C. Lauber	Present	Present
LESLIE	Anne A. Wasson	.....	.....
WHITLEY	R. D. Pitman	Present	Present

The information in the Roll Call was taken from the attendance record cards signed by the delegates prior to the meetings of the House, September 18 and 20.

Specialty Group Officers Elected At Annual Mtg.

Several specialty groups elected new officers at sessions held during the KMA Annual Meeting in Louisville, September 19-21.

The groups and officers include:

Kentucky Chapter, American College of Chest Physicians: Robert P. Belin, M.D., Lexington, President; Paul Pichardo, M.D., Glasgow, President-Elect; Stephen G. Edelstein, M.D., Lexington, Secretary-Treasurer.

Kentucky Association of Public Health Physicians: E. H. John, M.D., Harrodsburg, President; H. M. Vandiviere, M.D., Lexington, President-Elect; Gradie Rowntree, M.D., Louisville, Vice-President; Mary Fox M.D., Pikeville, Secretary-Treasurer.

Kentucky Chapter, American College of Radiology: Frank A. Bechtel, M.D., Louisville, President; Alfred O. Miller, M.D., Louisville, President-Elect; Fred Barlow, M.D., Louisville, Councilor; Joseph G. Whelan, Jr., M.D., Louisville, Secretary-Treasurer.

Kentucky Urological Association: Lonnie W. Howerton, M.D., Louisville, President; Edward H. Ray, Jr., M.D., Lexington, Secretary-Treasurer.

Kentucky Society of Plastic and Reconstructive Surgery: Andrew Moore, M.D., Lexington, President; Harry Stambaugh, M.D., Louisville, President-Elect; Louis Muldrow, M.D., Lexington, Vice-President; J. Thomas Giannini, M.D., Louisville, Secretary-Treasurer.

Kentucky Obstetrical and Gynecologic Society: Glenn W. Bryant, M.D., Louisville, President; John L. Duhring, M.D., Lexington, Vice-President; Clinton Ray Potts, M.D., Louisville, Secretary-Treasurer.

Kentucky Orthopaedic Society: Robert Runge, M.D., Covington, President; William Mitchell, M.D., Louisville, Vice-President; James W. Harkess, M.D., Louisville, Secretary-Treasurer.

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CORPORATION

IS PROUD OF THE HONOR OF BEING CHOSEN

BY THE

Kentucky Medical Association

TO ADMINISTER
THE DOCTOR'S OWN PLAN
FOR THE LEASING OF
CARS; MEDICAL, SURGICAL
& LABORATORY EQUIPMENT;
AND OFFICE FURNISHINGS

12 years experience in this field has qualified us to serve you well, and we appreciate this opportunity to extend our facilities.

General Leasing

ASSOCIATED WITH KOSTER-SWOPE, INC.
120 Bauer Ave., Louisville-St. Matthews

(502) 896-0383



Nose clear all knight

For upper respiratory allergies and infections including the common cold, Dimetapp Extentabs® effectively relieve the stuffiness, drip and congestion all night and all day long on just one Extentab every 12 hours. For most patients drowsiness or overstimulation is unlikely.

Dimetapp® Extentabs

Dimetane® (brompheniramine maleate), 12 mg . phenylephrine HCl, 15 mg . phenylpropanolamine HCl, 15 mg

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

A·H·ROBINS

A. H. Robins Company
Richmond, Va. 23220


for today's pain...
memory of yesterday's pain...
apprehension over tomorrow's pain–

A·H·ROBINS

For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain. Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides ¼ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

Phenaphen® with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

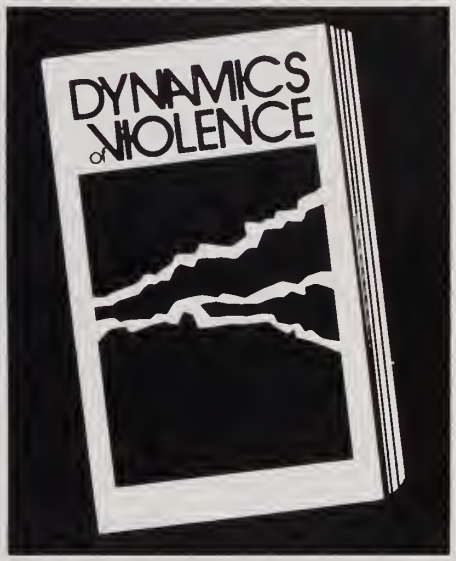
Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

(III) Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

A. H. Robins Company, Richmond, Virginia

DYNAMICS of VIOLENCE

Brief, brilliant studies drawn from a close, often painful scrutiny of human violence



Jan Fawcett's superbly edited book takes you on an exploration into this age of violence. Nightmarish cases from contemporary history...war, bombings, assassination, mass murder, rape, arson, riots...are the backdrops against which eminent psychiatrists discuss violence and aggression.

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SMJ 11/72

Send me _____ copy(s) of Dynamics of Violence priced at $3.95. (OP-240.) My payment of $ _____ is enclosed.

Name _____

Address _____

City/State/Zip _____



When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections. In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomycin hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in not less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

infections caused by susceptible strains of pneumococci, streptococci, and staphylococci, including penicillin-resistant strains. Staphylococcal strains resistant to Lincocin (lincomycin hydrochloride, Upjohn) have been recovered. Before initiating therapy, culture and susceptibility studies should be performed. Lincocin has proved valuable in treating patients hypersensitive to penicillin or cephalosporins, since Lincocin does not share antigenicity with these compounds. However, hypersensitivity reactions have been reported, some of these in patients known to be sensitive to penicillin.

Well tolerated at infusion site: Lincocin intravenous infusions have not produced local irritation or phlebitis, when given as recommended. Lincocin is usually well tolerated in patients who are hypersensitive to other drugs. Nevertheless, Lincocin should be used cautiously in patients with asthma or significant allergies.

In patients with impaired renal function, the recommended dose of Lincocin should be reduced to 25–30% of the dose for patients with normal kidney function. Its safety in pregnant patients and in infants less than one month of age has not been established.

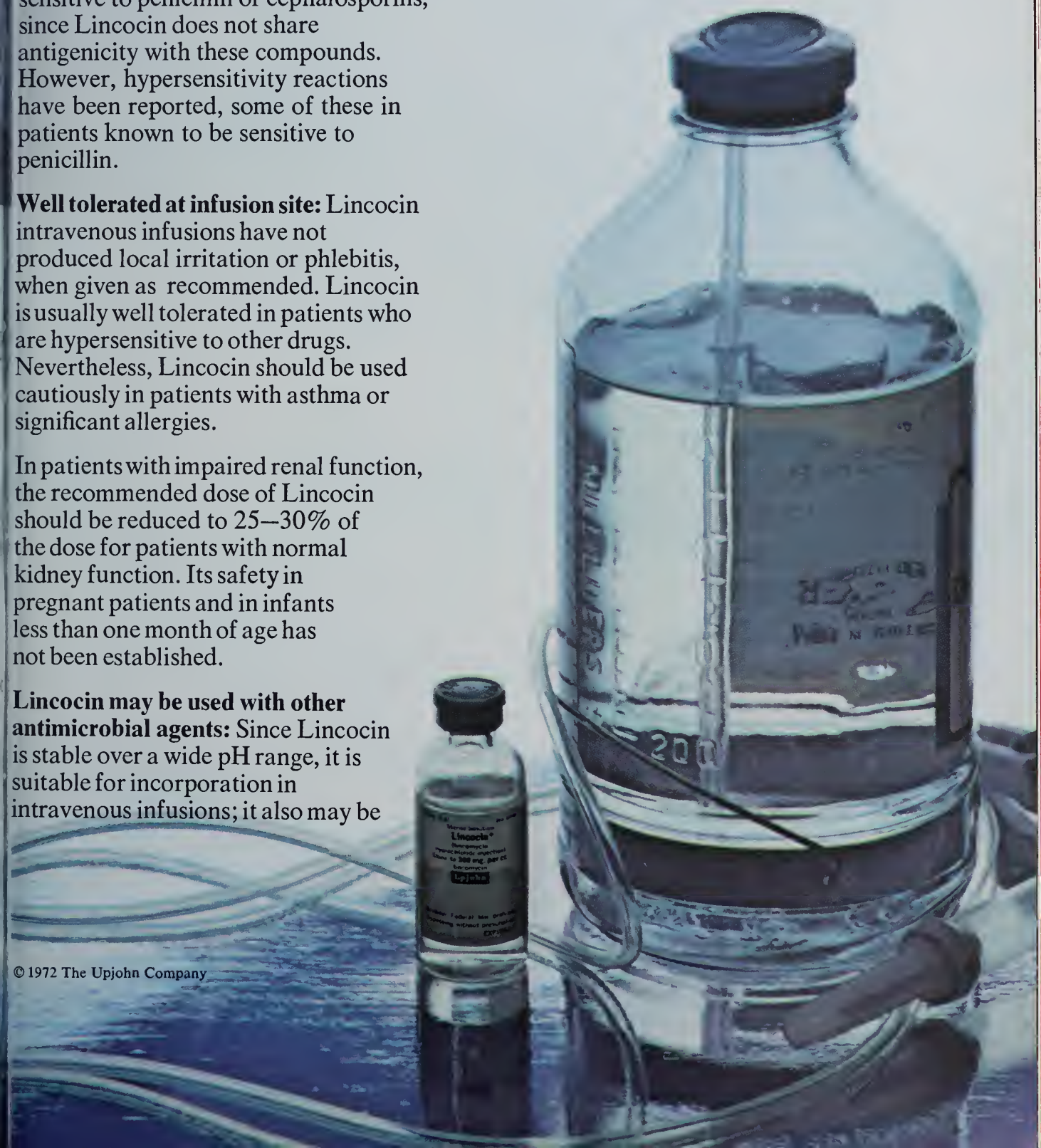
Lincocin may be used with other antimicrobial agents: Since Lincocin is stable over a wide pH range, it is suitable for incorporation in intravenous infusions; it also may be administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



© 1972 The Upjohn Company



Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported particularly after too rapid IV administration. Rare instances of cardiopulmonary arrest have been reported after too rapid IV administration. If 4.0 grams or more administered IV, dilute in 500 ml of fluid and administer no faster than 100 ml per hour. *Special senses*—Tinnitus and vertigo have been reported occasionally. *Local reaction*—Excellent local tolerance demonstrated to intramuscularly administered Lincocin (lincomycin hydrochloride). Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *500 mg* Capsules—bottles of 24 and 100. *Sterile Solution, 300 mg per ml*—2 and 10 ml vials and 2 ml syringe. *Syrup, 250 mg per 5 ml*—60 ml and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

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Iron therapy for anemia is almost as old as history itself



Celsus's empirical use of iron

Aulus Cornelius Celsus recommended an unusual form of iron therapy for the treatment of enlarged spleens—the oral administration of water that blacksmiths had used for dousing white-hot iron.

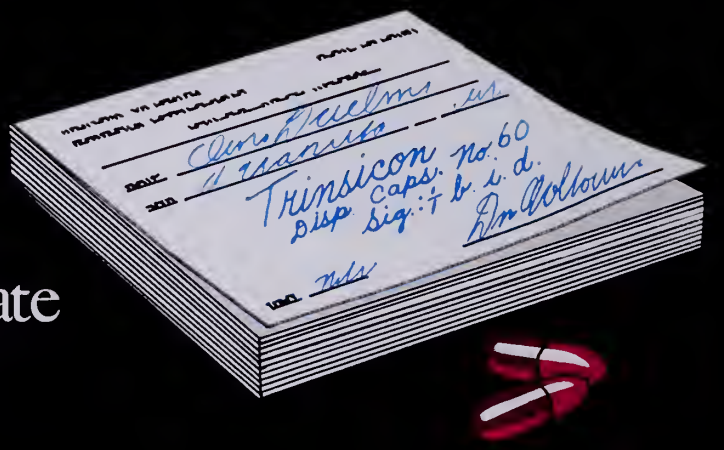
For more modern anemia therapy

Trinsicon®

Hematinic Concentrate with Intrinsic Factor

(See reverse side for prescribing information.)

Trinsicon®
Hematinic Concentrate with Intrinsic Factor



Description: Each Pulvule® contains—

Special Liver-Stomach Concentrate, Lilly (containing Intrinsic Factor)	240 mg.
Cobalamin Concentrate, N.F., equivalent to Cobalamin	7.5 mcg.
(The total vitamin B_{12} activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)	
Iron, Elemental (as Ferrous Fumarate)	110 mg.
Ascorbic Acid (Vitamin C)	75 mg.
Folic Acid	0.5 mg.

Indications: Trinsicon is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia. Therapeutic quantities of hematopoietic factors that are known to be important are present in the recommended daily dose.

Vitamin B_{12} with Intrinsic Factor—When secretion of intrinsic factor in gastric juice is inadequate or absent (e.g., in Addisonian pernicious anemia or after gastrectomy), vitamin B_{12} in physiological doses is absorbed poorly, if at all. The resulting deficiency of vitamin B_{12} leads to the clinical manifestations of pernicious anemia. Similar megaloblastic anemias may develop in fish tapeworm (*Diphyllobothrium latum*) infection or after a surgically created small-bowel blind loop; in these situations, treatment requires freeing the host of the parasites or bacteria which appear to compete for the available vitamin B_{12}. Strict vegetarianism and malabsorption syndromes may also lead to vitamin B_{12} deficiency. In the latter case, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary for adequate treatment of the patient.

Potency of intrinsic factor concentrates is determined physiologically, i.e., by their use in patients with pernicious anemia. The liver-stomach concentrate with intrinsic factor and the vitamin B_{12} contained in two Pulvules Trinsicon provide 1½ times the minimum amount of therapeutic agent which, when given daily in an uncomplicated case of pernicious anemia, will produce a satisfactory reticulocyte response and relief of anemia and symptoms.

Concentrates of intrinsic factor derived from hog gastric, pyloric, and duodenal mucosa have been used successfully in patients who lack intrinsic factor. For example, Fouts *et al.* maintained patients with pernicious anemia in clinical remission with oral therapy (liver extracts or intrinsic factor concentrate with vitamin B_{12}) for as long as twenty-nine years.

After total gastrectomy, Ficarra found multifactor preparations taken orally to be "just as effective in maintaining blood levels as any medication that has to be administered parenterally." His study was based on twenty-four patients who had survived for five years after total gastrectomy for cancer and who had been taking two Pulvules Trinsicon daily.

Folic Acid—Folic acid deficiency is the immediate cause of most, if not all, cases of nutritional megaloblastic anemia and of the megaloblastic anemias of pregnancy and infancy; usually, it is also at least partially responsible for the megaloblastic anemias of malabsorption syndromes, e.g., tropical and nontropical sprue.

It is apparent that in vitamin B_{12} deficiency (e.g., pernicious anemia), lack of this vitamin results in impaired utilization of folic acid. There are other evidences of the close folic acid-vitamin B_{12} interrelationship: (1) B_{12} influences the storage, absorption, and utilization of folic acid, and (2), as a deficiency of B_{12} progresses, the requirement for folic acid increases. However, folic acid does not change the requirement for vitamin B_{12}.

Iron—A very common anemia is that due to iron deficiency. In most cases, the response to iron salts is prompt, safe, and predictable. Within limits, the response is quicker and more certain to large doses of iron than to small doses.

Each Pulvule Trinsicon furnishes 110 mg. of elemental iron (as ferrous fumarate) to provide a maximum response.

Ascorbic Acid—Vitamin C plays a role in anemia therapy. It augments the conversion of folic acid to its active form, folinic acid. In addition, ascorbic acid promotes the reduction of ferric iron in food to the more readily absorbed ferrous form. Severe and prolonged vitamin C deficiency is associated with an anemia which is usually hypochromic but occasionally megaloblastic in type.

Contraindications and Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

Folic acid *alone* is unwarranted in the treatment of pure vitamin-B_{12}-deficiency states, such as pernicious anemia. Indeed, the use of folic acid in large doses in pernicious anemia without adequate vitamin B_{12} may result in hematologic remission but neurological progression.

As with all preparations containing intrinsic factor, resistance may develop in some cases of pernicious anemia to the potentiation of absorption of physiological doses of vitamin B_{12}. If resistance occurs, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary for adequate treatment of the patient. No single regimen fits all cases, and the status of the patient observed in follow-up is the final criterion for adequacy of therapy. Periodic clinical and laboratory studies are considered essential and are recommended.

In extremely rare instances, skin rash suggesting allergy has been noted following the oral administration of liver-stomach material. Allergic sensitization has been reported following both oral and parenteral administration of folic acid.

Hemochromatosis and hemosiderosis are contraindications to iron therapy.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastrointestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects in the iron-sensitive patient.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500 and in Identi-Dose® (unit dose medication, Lilly) in boxes of 100. [0900971]

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And since many overweight patients already have normal or high levels of endogenous insulin, why not consider DBI-TD?

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In adult-onset, nonketotic diabetics uncontrolled by diet alone...

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Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.

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Warnings: Use during pregnancy is to be avoided.

Precautions: 1. *Starvation Ketosis:* This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.** 2. *Lactic Acidosis:* This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis. 3. *Hypoglycemia:* Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake.
(B) 98-146-103-D (6/72)

For complete details, including dosage, please see full prescribing information.

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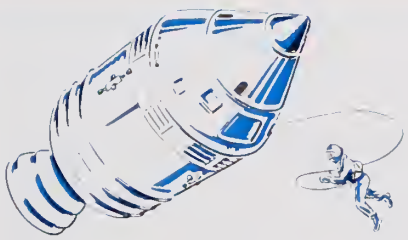
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Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.

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When it's mandatory to keep the post-coronary patient calm, consider Valium (diazepam).

Although he's promised to take it easy back on the job, you know he's going back to the same stressful circumstances that may have contributed to his hospitalization. If he experiences excessive anxiety and tension because of overreaction to stress, your prescription for Valium can bring relief. During the period of readjustment Valium can quiet undue anxiety.

For moderate states of psychic tension, 5-mg or 2-mg Valium tablets *b.i.d.* to *q.i.d.* can usually provide reliable relief. For severe tension/anxiety states, the 10-mg tablets often produce desired results.

The most commonly reported side effects are drowsiness, ataxia and fatigue. Until individual response is determined, caution patient against driving or operating dangerous machinery.

Valium® (diazepam)

For the tense cardiac patient who must be kept calm

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults*: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients*: 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children*: 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

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The Journal of The KENTUCKY Medical Association

Season's Greetings



DEC 29 1972

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Everybody experiences psychic tension.



Most people can handle this tension.



Some people develop excessive psychic tension and need your counseling,



and a few may need counseling
and the psychotropic action of Valium® (diazepam).

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

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BUYERS GUIDE

DECEMBER BUYERS GUIDE FOR JOURNAL OF KMA 1972

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MESSAGE FROM THE PRESIDENT



Daily Prayer for the Physician

"I begin once more my daily work. Be Thou with me, Almighty Father of Mercy, in all my efforts to heal the sick. For without Thee, man is but a helpless creature. Grant that I may be filled with love for my art and for my fellow men. May the thirst for gain and the desire for fame be far from my heart. For these are the enemies of Pity and the ministers of Hate. Grant that I may be able to devote myself, body and soul, to Thy children who suffer in pain.

"Preserve my strength, that I may be able to restore the strength of the rich and the poor, the good and the bad, the friend and the foe. Let me see in the sufferer the man alone. When wiser men teach me, let me be humble to learn; for the mind of man is so puny and the art of healing is so vast. But, when fools are ready to advise me or to find fault with me, let me not listen to their folly. Let me be intent upon one thing, O Father of Mercy, to be always merciful to Thy suffering children.

"May there never rise in me the notion that I know enough but give me strength and leisure and zeal to enlarge my knowledge. Our work is great and the mind of man presses forward forever. Thou hast chosen me in Thy grace to watch over the life and death of Thy creatures. I am about to fulfill my duties. Guide me in this immense work so that it may be of avail." —Maimonides

This prayer impressed me as something we could well remember every day of the year and certainly in a season when we think of the rich blessings which have been bestowed on us.

On behalf of the Officers and Staff of KMA, I want to take this opportunity to wish you and your families a happy, pleasant Holiday Season.



From the files of the

COMMITTEE FOR THE

STUDY OF MATERNAL MORTALITY

THIS 18-year-old married, white, gravida 1, para 0, was under the care of a private physician. Her EDC was the last of January, 1970, and she weighed 135 lbs and was 5′5″ tall. Her prenatal course was uncomplicated with the exception of some pedal and pretibial edema which responded to Esidrix therapy. She was admitted to the hospital on February 9, 1970, with spontaneously ruptured membranes. Physical examination was within normal limits. The uterus was term size, the fetal heart was normal, the cervix was 1-2 cm dilated, 80% effaced with a cephalic presentation and free flow of amniotic fluid.

Over the next 24 hours the patient had what was described as ineffectual contractions. On the afternoon of the 10th she had a temperature spike to 102°. A complete physical examination revealed the lungs to be clear. Antibiotic therapy with aqueous Penicillin and Kantrex was instituted. Uterine contractions then began to increase with labor proceeding uneventfully until approximately 2:30 a.m., February 11, 1970, when cervical dilation reached 5-6 cm and there was no further progress. Pitocin augmentation was initiated and carried out for two hours without significant change in the cervical dilation in spite of adequate contractions. Consultation was obtained and it was elected to proceed with Cesarean section for cephalopelvic disproportion.

After attempted spinal tap resulted in five bloody taps, general anesthesia was induced with Pentothal. A low transverse incision was made in the uterus. The amniotic fluid was thickly meconium stained. A 9 lb 3 oz stillborn girl was delivered at 6:25 a.m. The placenta was removed manually. Just before the infant was delivered the patient regurgitated an excessive amount of thick green fluid with subsequent aspiration and cyanosis. With the assistance of the surgical assistant an endotracheal tube was inserted and the patient was suctioned and the tracheobronchial tree irrigated with the return of a large amount of bile-colored fluid.

The patient's condition seemed to stabilize and the uterine incision was closed as well as the abdomen, fascia and skin. Shortly following the completion of the surgical procedure the patient began to cough and expel voluminous amounts of pink-colored frothy fluid from her endotracheal tubes. In spite of oxygenation and frequent suctioning, the pulmonary fluid continued to accumulate. Another surgical consultant was called. Atropine, aminophyllin and Solu-cortif were administered. At approximately 8:15 a.m. she developed cardiac arrest. External cardiac massage and positive pressure oxygen resulted in the return of a sinus tachycardia with good blood pressure. In spite of intensive therapy the patient experienced approximately four additional cardiac arrests and continued to exude large amounts of pulmonary fluid through the course of the morning. At 10:25 a.m. she experienced her final cardiac arrest and expired.

An autopsy was obtained. The final diagnosis was bronchopneumonia, acute pulmonary due to cardiac arrest.

Comment

This death was classified as a direct obstetrical death with preventable factors. The autopsy confirmed the suspected diagnosis of aspiration pneumonia with pulmonary edema. The lesson to be learned is that the endotracheal tube must be inserted before the patient has the opportunity to aspirate. Had this patient been properly treated with large doses of intravenous steroids plus antibiotics and thorough irrigation of the tracheobronchial tree she possibly could have survived.



ANSWERS TO YOUR QUESTIONS ABOUT BLUE SHIELD

Q. Do Blue Cross Certificates of Membership provide coverage for inpatient hospital admissions which are primarily for diagnostic evaluation?

A. Not in the majority of cases. Most Blue Cross Subscribers do not pay dues for this type of coverage. However, there is a small percentage of Blue Cross Subscribers who have purchased this benefit and are paying additional dues for this type of coverage.

Q. What if the patient is admitted in acute distress, but his physician has not diagnosed his illness at that time?

A. It is **not** *intended that Blue Cross Certificates of Membership deny benefits to any member who has a reasonable medical need for inpatient hospital care. Benefits will be paid when the Member is admitted because he is ill to a degree requiring hospital care and skilled observation, even though his condition is not fully diagnosed at the time of admission.*

Q. Many ulcer cases are difficult to diagnose. What is the Blue Cross position on ulcer cases?

A. Ulcer cases are also difficult for Blue Cross in the administration of Certificate benefits. It is intended that benefits **not** *be paid for patients admitted for diagnostic procedures when* **medical** *circumstances would allow the necessary work to be done in the physician's office, in the hospital outpatient department or other outpatient diagnostic testing facility.*

Q. What if the patient is admitted for diagnostic tests which, due to their complexity, cannot be performed on an outpatient basis?

A. Blue Cross will pay benefits when the Member is hospitalized for diagnostic procedures which in themselves necessitate inpatient care.

Q. Do Blue Cross Certificates of Membership provide coverage for outpatient diagnostic services?

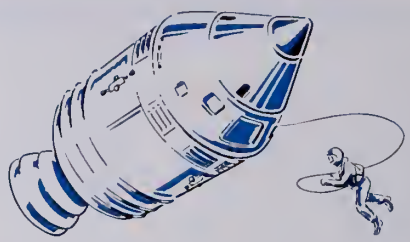
A. Many Blue Cross and Blue Shield Members do have some level of coverage for outpatient diagnostic services. However, benefits for inpatient admissions will not be paid either; if the Member is admitted for diagnostic testing for personal convenience or to obtain benefits that are not available to him on an outpatient basis.

Q. Who makes the decisions on borderline cases?

A. Borderline cases are referred to the Medical Director of Blue Cross and Blue Shield for review. Lay staff do **not** *make decisions requiring medical judgement. If special circumstances warrant, the case may be referred to the appropriate Committee of the Kentucky Medical Association for review.*

Q. What recourse does a patient and/or a physician have if he is not in agreement with the determination made on a given case?

A. Information on claims received by Blue Cross and Blue Shield do not always reflect the special circumstances involved, and many times it is necessary to ask for additional information. Any time the attending physician or the patient has reason to question the determination made on a case, he may request the case to be reopened and considered again. In such instances, additional medical information and/or the physician's reasoning is very helpful in re-evaluating the original determination.



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . . a prophylaxis to prevent kidney or bladder calculi.

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Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

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Aulus Cornelius Celsus recommended an unusual form of iron therapy for the treatment of enlarged spleens—the oral administration of water that blacksmiths had used for dousing white-hot iron.

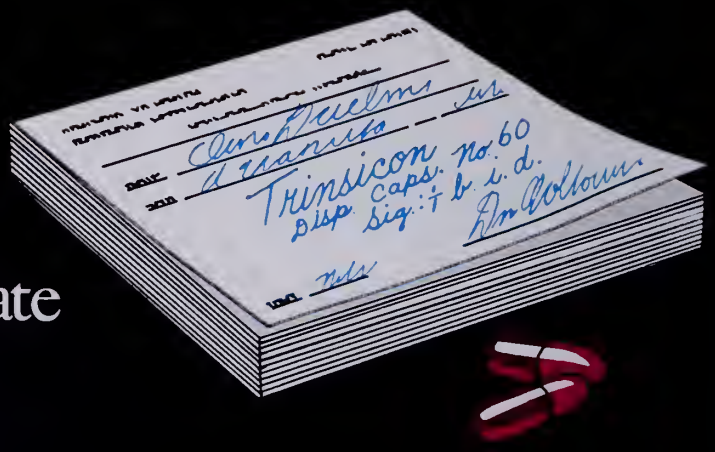
For more modern anemia therapy

Trinsicon®

Hematinic Concentrate with Intrinsic Factor

(See reverse side for prescribing information.)

Trinsicon®
Hematinic Concentrate with Intrinsic Factor



Description: Each Pulvule® contains—

Special Liver-Stomach Concentrate, Lilly (containing Intrinsic Factor)	240 mg.
Cobalamin Concentrate, N.F., equivalent to Cobalamin	7.5 mcg.
(The total vitamin B_{12} activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)	
Iron, Elemental (as Ferrous Fumarate)	110 mg.
Ascorbic Acid (Vitamin C)	75 mg.
Folic Acid	0.5 mg.

Indications: Trinsicon is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia. Therapeutic quantities of hematopoietic factors that are known to be important are present in the recommended daily dose.

Vitamin B_{12} with Intrinsic Factor—When secretion of intrinsic factor in gastric juice is inadequate or absent (e.g., in Addisonian pernicious anemia or after gastrectomy), vitamin B_{12} in physiological doses is absorbed poorly, if at all. The resulting deficiency of vitamin B_{12} leads to the clinical manifestations of pernicious anemia. Similar megaloblastic anemias may develop in fish tapeworm (*Diphyllobothrium latum*) infection or after a surgically created small-bowel blind loop; in these situations, treatment requires freeing the host of the parasites or bacteria which appear to compete for the available vitamin B_{12}. Strict vegetarianism and malabsorption syndromes may also lead to vitamin B_{12} deficiency. In the latter case, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary for adequate treatment of the patient.

Potency of intrinsic factor concentrates is determined physiologically, i.e., by their use in patients with pernicious anemia. The liver-stomach concentrate with intrinsic factor and the vitamin B_{12} contained in two Pulvules Trinsicon provide 1½ times the minimum amount of therapeutic agent which, when given daily in an uncomplicated case of pernicious anemia, will produce a satisfactory reticulocyte response and relief of anemia and symptoms.

Concentrates of intrinsic factor derived from hog gastric, pyloric, and duodenal mucosa have been used successfully in patients who lack intrinsic factor. For example, Fouts *et al.* maintained patients with pernicious anemia in clinical remission with oral therapy (liver extracts or intrinsic factor concentrate with vitamin B_{12}) for as long as twenty-nine years.

After total gastrectomy, Ficarra found multifactor preparations taken orally to be "just as effective in maintaining blood levels as any medication that has to be administered parenterally." His study was based on twenty-four patients who had survived for five years after total gastrectomy for cancer and who had been taking two Pulvules Trinsicon daily.

Folic Acid—Folic acid deficiency is the immediate cause of most, if not all, cases of nutritional megaloblastic anemia and of the megaloblastic anemias of pregnancy and infancy; usually, it is also at least partially responsible for the megaloblastic anemias of malabsorption syndromes, e.g., tropical and nontropical sprue.

It is apparent that in vitamin B_{12} deficiency (e.g., pernicious anemia), lack of this vitamin results in impaired utilization of folic acid. There are other evidences of the close folic acid-vitamin B_{12} interrelationship: (1) B_{12} influences the storage, absorption, and utilization of folic acid, and (2), as a deficiency of B_{12} progresses, the requirement for folic acid increases. However, folic acid does not change the requirement for vitamin B_{12}.

Iron—A very common anemia is that due to iron deficiency. In most cases, the response to iron salts is prompt, safe, and predictable. Within limits, the response is quicker and more certain to large doses of iron than to small doses.

Each Pulvule Trinsicon furnishes 110 mg. of elemental iron (as ferrous fumarate) to provide a maximum response.

Ascorbic Acid—Vitamin C plays a role in anemia therapy. It augments the conversion of folic acid to its active form, folinic acid. In addition, ascorbic acid promotes the reduction of ferric iron in food to the more readily absorbed ferrous form. Severe and prolonged vitamin C deficiency is associated with an anemia which is usually hypochromic but occasionally megaloblastic in type.

Contraindications and Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

Folic acid *alone* is unwarranted in the treatment of pure vitamin-B_{12}-deficiency states, such as pernicious anemia. Indeed, the use of folic acid in large doses in pernicious anemia without adequate vitamin B_{12} may result in hematologic remission but neurological progression.

As with all preparations containing intrinsic factor, resistance may develop in some cases of pernicious anemia to the potentiation of absorption of physiological doses of vitamin B_{12}. If resistance occurs, parenteral therapy, or oral therapy with so-called massive doses of vitamin B_{12}, may be necessary for adequate treatment of the patient. No single regimen fits all cases, and the status of the patient observed in follow-up is the final criterion for adequacy of therapy. Periodic clinical and laboratory studies are considered essential and are recommended.

In extremely rare instances, skin rash suggesting allergy has been noted following the oral administration of liver-stomach material. Allergic sensitization has been reported following both oral and parenteral administration of folic acid.

Hemochromatosis and hemosiderosis are contraindications to iron therapy.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastrointestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects in the iron-sensitive patient.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500 and in Identi-Dose® (unit dose medication, Lilly) in boxes of 100.

[0000]

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Hematinic Concentrate with Intrinsic Factor
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"The history of science, and in particular the history of medicine . . . is . . . the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

– George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

Results of a questionnaire to 7,000 physicians:

62.9%
Believe combination drug products are useful.

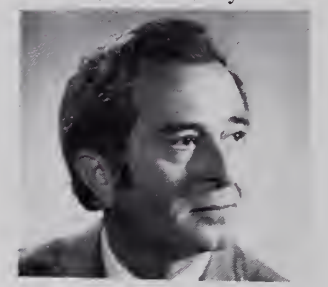
13.8%
Do not believe combination drug products are useful.

Are combination drug product useful in treatment involvi concomitant use of two or more drugs

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Ohviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, he it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescrihe a properly tested and rational comhination, you should have less worry ahout pharmaceutical or pharmacological compatihility – and about reasonahle dosage ratios as well. Compatibility of the formulation should he demonstrated in the lahoratory and clinic hefore the product is availahle for prescription–which is more than can usually he said for the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of suhstantial numhers of "typical" patients.

There is no doubt that many "atypical" patients are to he found, and for them the prefabricated comhination must be rejected. But that hardly argues for eliminating rational comhinations from the market. Think, for example, of the problems that would arise if the components of widely accepted comhinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescrihed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given comhination contains. For example, a doctor might know that a patient is allergic to aspirin hut forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerahle discomfort, to say the least. This prohlem is a function of physician education, rather than of comhination therapy as such. Improving doctors' knowledge ahout all medicaments they prescrihe is a prohlem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a comhination may prove to be the most effective choice. A good example of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But hlood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which comhinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think comhinations should he evaluated somewhat differently if they are old and estahlished or new and untried.

In today's regulatory atmosphere, there is no possibility of a new comhination heing put on the market without a suhstantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investigators and cost a great of money. I wish we agree on a "grandf clause" approach to p rations that have been for a numher of year that have an appar satisfactory track rec

For example, I some of the antihiotic binations that were off the market by the performed quite well. thinking particular penicillin - streptom combinations that pat –especially surgica tients–were given ir injection. This mad less discomfort for th tient, less deman nurses' time, and f opportunities for d errors. To take su preparation off the m doesn't seem to be medicine, unless actua age showed a great d harm from the inje (rather than the p use) of the comhinati

The point that shou emphasized is that are hoth rational and tional comhinations. real question is, who s determine which is w Obviously, the FDA play a major role in ing this determinatio fact, I don't think it avoid taking the ulti responsibility, hut it s enlist the help of ou physicians and exper assessing the evidence in making the ultimat cision.

Maker of Medicine

W. Clarke Wescoe, M.D.
President
Winthrop Laboratories



If two medications are sed effectively to treat a ertain condition, and it is nown tbat they are com- atible, it clearly is useful nd convenient to provide hem in one dosage form. t would make no sense, in act it would be pedantic, o insist tbey always he rescribed separately. To void the appearance of edantry, the "expert" de- ries the comhination he- use it is a fixed dosage rm. When the "expert" voke s the concept of fixed osage form he obscures e fact that single-ingre- ent pharmaceutical prep- rations are also fixed osage forms. By a singular mantic exercise he im- ies a pejorative meaning tbe term "fixed dose" ly when he uses it with spect to combinations. bat is ignored is tbe sim- e fact that only in the rest of circumstances es any physician attempt titrate an exact thera- utic response in his pa- nt. It is quite possihle at some aches and pains ll respond to 500 mg. of pirin yet that fact does t militate against the *us- l* dose being 650 mg.

The other semantic ploy en called into play is to scribe a combination oduct as rational or irra- nal.

Take antibiotic mixtures, e source of much of the ticism generated against combinations generally. Obviously, no one should he exposed willy-nilly to the potential side effects of two or three antihiotics wben only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in tbese circumstances, as he should be.

There is no clear definition of tbe word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may hest be defined as the opinion of those in power at the moment.

Otber factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, tberefore, this factor alone supports the logic of combination therapy.

Tbe cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by $443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irrefutahle medical reasons.

The part played by government on tbis question, of course, is fundamental. The FDA sbould play a role in determining which combinations are reasonable. That role, as defined hy law and regulation, is to ensure that any medication on tbe market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as tbe addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, hut" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading tbe actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and hounds but rather by small painstaking steps—and that some of tbese steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In tbe end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because tbe ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscrihe the combination generally.

Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.

The Pharmaceutical Manufacturers Association
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The JOURNAL of the
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ISSUED MONTHLY UNDER THE DIRECTION OF THE BOARD OF TRUSTEES

VOLUME 70 DECEMBER 1972 No. 12

Fibular Bone Grafting in Non-Union of the Humerus†

K. ARMAND FISCHER, M.D., KENTON D. LEATHERMAN, M.D., AND WAYNE W. KOTCAMP, M.D.*

Louisville, Kentucky

In non-union of the shaft of the humerus a double fibular bone graft gives excellent fixation and provides a chance of early healing.

IN the early days of our century non-union of humeral fractures were known to occur more often than in any other long bone. Due to the efforts of Albee with inlay bone grafts, Campbell with onlay bone grafts and bone pegs and Henderson with onlay bone grafts and bone screws for fixation, the treatment of delayed and non-union of humeral fractures was greatly enhanced. All of these methods required long fixation in casts for up to six months or more and this was not totally a pleasant aspect of the treatment.

With the introduction of stainless steel screws and plates, together with bone grafts, a better fixation of the grafts occurred with a higher percentage of healing. The introduction of double tibial bone grafts by Boyd in 1943 improved the chances of healing of non-union in long bones. Some now use a large intramedullary nail and iliac bone grafts and even this method has a small percentage of failures.

The ideal treatment of non-union in fractures of the humerus should provide solid fixation at the fracture site with the addition of bone grafting and minimal immobilization of the shoulder and elbow. The majority of cases of non-union of the humerus that we have encountered have stiff shoulders and loss of elbow motion due to prior immobilization. The majority of cases that we have seen have sustained their fractures by violent means and anywhere from two to ten operations have been performed on the humerus before coming to our care. Frequently there has been metal in the wounds in the form of screws, wires, plates and at times we have encountered a low grade type of infection when we first saw them.

In treating non-union of the shaft of the humerus, we have used all suggested methods, but have found one procedure now to be more useful than the others; namely, double onlay fibular bone grafts with stainless steel screw fixation. In the past, we have used double onlay tibial bone grafts, but now we have more confidence in the fibular bone grafts, due to the fact that we can use shorter grafts and the fixation is more rigid because there are two cortical surfaces to the fibula which accounts for its strength. With this method of fixation, we have been able to discard all immobilization very quickly in most cases and allow early usage of the shoulder and elbow. Whenever possible we use a Velpeau dressing for one day and then apply a sling. Guarded active motions are started in the shoulder and elbow as soon as the patient can tolerate them. After removing any fibular graft, the patient is ambulated the afternoon of surgery to guard against thrombosis and embolism.

At the time of operation, a Henry approach is used at the posterior-lateral aspect of the leg removing eight inches of bone, dividing it equally and placing one graft on the area of non-union with four screws and the second graft on an adjacent area with two screws.

†*Presented before the Kentucky Orthopaedic Society, September 21, 1971.*

**Section of Orthopaedic Surgery, University of Louisville School of Medicine, Louisville*

Formerly, we used four screws in each graft, but we found that this is not necessary. Also, in the past, we have placed grafts on the opposite sides of the humerus and fixed them by the so-called clamp-screw method, but we found that this is unnecessary. If one thinks it advisable, the ends of the bones can be freshened and all soft tissue removed. Too much freshening of the bone frequently causes fractures and lessens the desired fixation afterwards.

In assessing the cause of fractures of the humerus with non-union in a series of 20 cases, automobile accidents accounted for 13 non-unions. Five were caused by industrial accidents and two were home accidents. The age incidence in the series range from 20 to past 70 years of age. Fifteen cases occurred between 30 and 60 years of age.

The average time of the bone graft operation following the original fracture was seven months. In calculating this number we did not include one case that was done at nine days and another that was 20 years following the original injury. Four of the patients encountered were injured four years before the operation.



FIG. 1 Non-union in humerus after three attempts at fixation.

The healing time from bone grafting to unrestricted usage was from nine weeks to 24 weeks, with the average time being 14 weeks.

In any series of such bone grafts there are complications. One patient, who did not heal, had his original fracture three years before coming to us with residual osteomyelitis in the distal fragment. Since the original fracture, the patient had had eight surgical procedures before coming to us. We did a sequestrectomy and the wound healed promptly. Ten months later a double fibular bone graft was performed with primary healing of the wound. The bone grafts healed to the upper and lower fragments and the patient was taken out of all immobilization and good function returned. One year after the bone grafting procedure he returned with a small amount of drainage in the wound of several weeks duration. X-rays showed some deterioration of the grafts, which was thought to be due to an infection. An exploration revealed some dead bone and incomplete healing of the non-union. The wounds healed promptly following the sequestrectomy. He was told that he would have to wait another year for future surgery. He was never seen again.



FIG. 2 One month after fibular bone grafting, no immobilization.

Another case had had a compound fracture before the grafting procedure. After a sufficient time, the bone did not heal and a bone graft was done. The non-union healed but there was drainage around one screw area. With this persistent drainage, an exploration was done and all screws were removed and a little granulation tissue was found around one screw. Primary healing of the wound occurred following this, with no further troubles.

There were no postoperative nerve complications in the 20 patients. There were preexisting nerve problems in two patients before surgery. One case had severe fractures around the elbow and had an ulnar paralysis in the hand. The second case had a deltoid paralysis prior to surgery and it persisted. The same patient had a partial ulnar paralysis in the fourth and fifth fingers of the same hand. In



FIG. 3 Healed non-union and bone grafts.

this series there were no radial nerve complications before or after surgery.

At times the screws are prominent in the area of the scar and we have had to remove screws in several cases. All patients have recovered a good useful range of motion in the elbows and shoulders, but all have not recovered complete usage. A number of patients have had other conditions of the forearms and elbows due to violent injuries and some of these cases had more loss of motion in the elbow than usual. Some of these had elbow fractures.

In one case, we did a primary grafting of the humerus at nine days following an accident. The patient had spinal fractures with paralysis and it was desirable to get this man out of bed as quickly as possible with braces and crutches. The result of primary bone grafting was healing at 10 weeks and the patient was able to be up and ambulated. In spinal fractures with associated fractures of the humerus, we believe that any fracture of the humerus with considerable displacement that it is well to do a primary open procedure in order to get the patient out of bed as quickly as possible. It is often hard to control a hanging cast in bed, so other methods of treatment are desirable with this type of case to obtain quick union.

The results of double fibular bone grafting of the humerus in 20 cases have been successful in 19; one failure occurred due to a low grade infection that had not died out in the wound at 10 months following a sequestrectomy.

Conclusions

In non-union of the shaft of the humerus a double fibular bone graft gives excellent fixation and provides a chance of early healing.

Minimal external fixation has been used in this group of cases, with early motion being allowed in the shoulder and elbow.

No definite time can be fixed to do a bone graft following an infected fracture to insure primary healing without any complications.

At times a primary bone grafting procedure with double fibular grafts is indicated when there is interposition of soft parts or when there is need for early ambulation and in multiple fractures which are hard to maintain by external means.

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Kentucky State Health Department Rubella Immunization Statistics†

Errors and a Proposal for Alleviating These Inaccuracies

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While examining the various sources of available information concerning rubella immunization status of the Pennyrile Region school children, many discrepancies were found. These errors are described and a proposal for eliminating these inaccuracies is presented.

A study made by the Department of Community Medicine, University of Kentucky College of Medicine of the health problems of the Pennyrile Region showed State Health Department reports which indicated that rubella immunization status of the low population counties is higher than that of counties with greater population.

The reported immunization status of the population five to nine years of age of the nine Pennyrile counties is as follows:

County	% Immunized
Lyon	91.6
Caldwell	86.3
Crittenden	84.5
Livingston	77.3
Muhlenberg	74.1
Todd	71.1
Christian	70.0
Trigg	69.4
Hopkins	48.2

Although this is not an exact correlation, there is a tendency for the more populous counties to have fewer reported immunizations (Christian and Hopkins) and the smaller counties to have more reported immunizations (Lyon and Crittenden).

These varying percentages may be explained in one of several ways:

1) In more populous counties more children are seen by private physicians and the local health department, causing a lower reported level. And in smaller counties where there are fewer physicians, almost all the immunizations are given by the local health department which emphasizes this aspect of health care.

2) Private physicians do not give as many rubella immunizations to the children as does the health department.

3) Health departments report inaccurate figures.

Methods

These possibilities were investigated in the following manner:

1) The county with the lowest reported rubella immunization level and the next to largest population (Hopkins) and the two counties with the highest reported rubella immunization levels and lowest populations (Crittenden and Lyon) were chosen to be studied.

2) School health records of all first and second graders in Crittenden and Lyon counties were examined. In Hopkins County, the elementary schools were divided into urban and rural by location, and a random sample of five schools in each of these two groups was taken. School health records of all first and second graders at these schools were then examined.

3) The following information was obtained from each record:

a) Name, age, sex.

b) The immunization status of each child for rubella, diphtheria-pertussis-tetanus (DPT) or diphtheria-tetanus (dT), polio (OPV or Salk), measles and smallpox.

c) The provider of the immunization, either health department or private physician (as determined by signature on the child's health form).

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4) In Hopkins County, the school health records were compared with county health department records. This was done for a random sample of students who received their immunizations from private physicians and students who received their immunizations from the health department. In Crittenden and Lyon counties the county health department nurse checks the school records against health department records.

Results

Of the 1,095 children in Hopkins County whose records were reviewed, 896 (82%) received their immunizations (of any type) from private physicians and 199 (18%) received their immunizations from the health department. In Crittenden County 49 (19%) of 263 children received their immunizations from private physicians and 214 (81%) from the health department. In Lyon County 155 records were reviewed: 10 (6.5%) received immunizations from private physicians and 145 (93.5%) from the health department.

For rubella immunizations, the rates based on school records in the three counties showed Hopkins, 430 (40%), Crittenden, 116 (44%), and Lyon, 88 (57%). In all three counties a higher proportion of children who received their immunizations from the health department had the rubella immunization than those who went to private physicians (Table 1).

TABLE 1
Provider of Rubella Immunization

	HOPKINS	LYON	CRITTENDEN
Health Dept.	199	145	214
# having rubella	91 (46%)	85 (59%)	98 (46%)
Private Physician	896	10	49
# having rubella	339 (38%)	3 (30%)	18 (37%)

The most interesting data comes from a comparison of Hopkins County school health records and health department records (Table 2). Ninety-nine students who utilized the health department as provider of immunizations were studied further; 41 were listed on school records as having received rubella immunization. However, in checking health department records it was found that an additional 25 students were immunized against rubella, but this was not noted on the school record. When a private physician was listed as provider the situation is reversed. When records of 167 students that listed a private physician as provider were studied, 50 were noted by health department records to have had rubella immunization, but school records add an additional 58 students to the immunized group. Table 3 shows that the rubella immunization rate for the sample varies greatly depending on source of information. If data from school and health department records is combined, the "true" rubella immunization rate for Hopkins County first and second graders is 65%. The State reported immunization rate for the five to nine age group in Hopkins County was only 48.2%.

TABLE 2
Location of Rubella Immunization Record in Hopkins County

	Recorded Provider Health Dept. (N=99)	Private M.D. (N=167)
On School Record Only	4	58
On Health Dept. Record Only	25	30
On Both Records	37	20
Total Rubella Immunizations	66	108

Discussion

Based on the data we collected, all three explanations advanced seem to be true. In the more populous counties, only a small proportion of school children receive their immunizations from the health department, while in the small counties where there are few physicians, the vast majority of school children seek their immunizations at the health department. It was also shown that less than one-third of the rubella immunizations given by private physicians are reported to the health department. Data from all three counties show that a smaller percentage of the patrons of private physicians receive rubella immunization when compared to health department patrons.

The fact that private physicians do not report the immunizations they administer introduces great error into health department reported immunization rates as demonstrated by the discrepancy in the rates of Hopkins County.

In Lyon and Crittenden counties, rubella immunization rates for the five to nine age group are listed by the health department as 91.6% and 81.5% respectively. In both counties, school records are said to be checked against health department records by the department

nurse. It was believed that this would mean that school records would be a reliable indication of the immunization status of the children. However, according to school records for the 418 first and second graders in the two counties, 204 (49%) have been immunized. The combined health department reported rate for the two counties is 87%. Even if everyone of the 688 remaining five to nine year olds in the two counties was immunized, the rate could not be raised from 49% to the reported 87%. This indicates that for Lyon and Crittenden counties as well, one source of data is not adequate to determine the "true" immunization status of the county.

What is obvious despite discrepancies in data is that not every first and second grader has the full complement of immunization as required by law. Any immunization rate less than 100% indicates non-compliance, but the effort necessary to gain compliance can only be judged from accurate figures.

TABLE 3
Variations in Rubella Immunization Rate as Determined by Source of Data

	Students and Provider		
	Health Dept. (N=99)	Private M.D. (N=167)	Combined (N=266)
On Health Dept. Record Only	62%	30%	42%
On School Record Only	41%	47%	45%
Combined Records	65%	65%	65%

To gain more accurate information and to assist in the enforcement of state law the following system is proposed:

1) Students should not be allowed to enter school without an immunization certificate from the county health department. Cooperation of the school system is essential.

2) The health department should not issue this certificate unless the health department records show complete and up-to-date immunization status as required by law.

3) Private physicians should be provided with printed, pre-paid postcards which the physician would send to a child's health department whenever he administers an immunization, or this card could be sent to the state health department to be placed on a computer. This would be entered on the child's health department record.

4) At the beginning of the child's first, fifth and ninth grade years a copy of the health department records, showing the child to be immunized in compliance with the law would be placed in his school record.

5) If a child moves from the county, copies of his immunization and skin test record would be provided to the child's new health department, school and physician.

Such a system of course, would not need to be limited to school-age children. Because immunizations are required by law, parents will pressure physicians' compliance with such a reporting requirement, but efforts should be made to make all physician reporting quick and easy.

Summary

The Kentucky State Health Department reported immunization rates for rubella have been shown to be subject to great error because there are too many separate and non-communicating sources of supply and data. Centralization of supply is impractical, but as long as centralization of data is neither required nor encouraged, efforts at disease control and eradication will be useless because the scope of the problem will be indeterminable.

Medical Progress

Hepatitis and Australia Antigen

William V. Miller, M.D.*

In comparison with diseases such as syphilis, tuberculosis and congestive heart failure, hepatitis is a relatively new clinical entity. Little progress was made in the understanding of the illnesses which we call "viral hepatitis" until the last 25 years. The bitter experiences of armed forces personnel in World War II in Korea prompted investigation into the area, and it became clear that one form, designated infectious hepatitis, had a stormy and dramatic clinical course and usually resolved entirely. The second form of viral hepatitis was designated serum or post transfusion hepatitis and was characterized by a longer incubation time, insidious onset and more protracted clinical course, occasionally leading to progressive liver destruction. It was felt that infectious hepatitis was usually spread by the fecal-oral route and that serum hepatitis could be spread only by the parenteral route.

While this work was in progress, a group of blood bankers and medical geneticists were working on a protein abnormality found when the serum of a multi-transfused patient was mixed with the serum of an Australian aborigine. The resulting precipitin reaction was thought to identify a new protein called Australia antigen, which was also found to be present in serum of institutionalized children with Down's syndrome, leukemia and in a high percentage of certain tropical southeast Asian and Mediterranean populations. In contrast, only about one in 800 normal Americans had the antigen. It soon became clear that the antigen was associated with viral hepatitis, and research in the area proliferated.

Nomenclature

The original name Australia antigen was shortened to Au_1 or AuAg. Other investigators who had been working in hepatitis research called their antigens SH (serum hepatitis), or HAA (hepatitis associated antigen). Because of the confusing nomenclature, an international study group has recommended that the antigen be identified as HBAg (Hepatitis B Antigen) because of its association with the long incubation or B form of hepatitis. If an antigen identifying classical infectious hepatitis (Hepatitis A) is found, it will be called HAAg.

New Information about Hepatitis

All of the activity generated by these investigators has given us a new appreciation of the disease formerly called viral hepatitis. We now know that there are, in fact, two forms of the illness and that "infectious hepatitis" does indeed have a short incubation time and is spread not only by the fecal-oral route but by parenteral routes as well. And the long incubation form of the illness (serum hepatitis) can be spread not only by the parenteral route but also by the fecal-oral route. Because of the confusion of previous names, the illness formerly called infectious hepatitis was designed as Hepatitis A and the clinical entity called serum hepatitis was designated as Hepatitis B. These designations are important and are summarized in Table 1.

The characterization of these two clinical entities helped explain the confusing long incubation time of hepatitis which was apparently transmitted by the fecal-oral route and the very short incubation time of occasional illness transmitted by parenteral means. Furthermore, the beneficial effects of gamma globulin prophylaxis in some, but not all cases of hepatitis, was better appreciated when it became clear that gamma globulin prophylaxis was effective only with the Hepatitis A virus.

In the meantime, the virologists and blood

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bankers had been busy with the Australia antigen, now called HAA or HBAg, and had found that the antigen was present only in the long incubation hepatitis, or virus B, illness. Characterization of the antigen showed that it was a particulate material which looked very much like a virus under the electron microscope. It was found that blood transfusions containing the Australia antigen usually produced hepatitis in susceptable recipients, but blood transfusions which did not contain the antigen were much less likely to result in post transfusion hepatitis.

How and When Is HAA Detected?

Because of the clinical importance and frequency of hepatitis, most of the detection work has been done by scientists in the blood banking area. Initial agar gel diffusion detection methods were slow, requiring several days of incubation. They were also quite insensitive, and considerable effort was devoted to improving methodology. A sensitive method combining electrophoresis and diffusion in agar required only one to two hours and was much more sensitive than the older method. This method (CEP) has found widespread clinical use. Complement fixation was slightly more sensitive, but its great complexity and difficulty in interpretation have prevented it from becoming popular. Recently, a radioimmunoassay, which is considerably more sensitive than the electrophoretic technique, has come into use; but this system is expensive and requires 16-24 hours to complete. The relative advantages, disadvantages and sensitivity of the various methods are compared in Table 2.

Australia antigen, or HAA, was soon found to be present in a great many clinical entities, including not only hepatitis but other blood diseases and such apparently unrelated illnesses as polyarthritis and periarteritis nodosa. While many of the positives could be explained by apparent previous infection by hepatitis, some of the disease associations remain unexplained at this time. Even the relation of HAA to hepatitis itself is confusing. Not all cases of post transfusion hepatitis are HAA positive, and the antigen may appear prior to, during, or after the clinical illness. It may be present for only a few days or for many months or years.

The most common clinical pattern is for the antigen to appear shortly after the disease becomes icteric and to revert to negative as the patient improves. Occasionally, however, the antigen is not cleared and persists. Although the evidence is not yet complete, preliminary data suggests that this group of patients is likely to have chronic active hepatitis with progressive liver destruction. A small group of patients carry the antigen for many months or years without any evidence of liver disease whatsoever.

What Is the Importance of Antibody to HAA?

Unlike most other viral illnesses, detectable antibody to HAA is not a usual consequence of infection. More often, the antibody is detected in normal individuals or in polytransfused patients. While anti-HAA is presumptive evidence of previous infection, it is uncommon for patients with Hepatitis B infections to develop detectable amounts of the associated antibody. The clinical significance of the antibody, then, is unknown; and clinical trials to evaluate the protective effect of concentrated anti-HAA are in progress. Preliminary results suggest that these concentrates may be effective in preventing or attenuating the B virus disease.

How Effective Is Screening for Hepatitis in Blood Donors?

From what we have already said, it is apparent that both the A virus and B virus may

Table 1

	Virus A	Virus B
Synonyms	Infectious, epidemic short incubation	Serum, post transfusion, long incubation
Incubation	Median 37 days	Median 55 days
Onset	Acute	Insidious
Enzyme Abnormality	Transient but may be massive	Lower but persistent
Transmission	Oral and parenteral	Oral and parenteral
Gamma Globulin Prophylaxis	Attenuation	No Attenuation
Degree of Contagion	High	Moderate
HAA	Absent	Usually present

Table 2

Comparison HAA Detection Systems

Test	Time Required	Specificity	Relative Sensitivity
Agar Gel Diffusion	1-6 days	good	1
Counterelectrophoresis	1 hour	rare false positives	2-3
Complement Fixation	3 hours	false positives, false negatives	3
Radioimmunoassay	18 hours	false positives	5-10

be transmitted by blood transfusion, but only the B virus can be detected by current methodology. Since Hepatitis A is probably more common than Hepatitis B and since even the most sensitive methodology is not able to detect sera with the B virus, testing for hepatitis in blood donors is still relatively crude. We estimate that widespread application of testing has reduced the incidence of post transfusion hepatitis by approximately 25%, but data confirming this estimate are not yet available. It is apparent that much more sensitive and effective techniques must be available for detecting the B virus; and as yet, there is no test which can detect the presence of the A virus in transfused blood. Because of this, careful questioning and examination of blood donors remains of paramount importance in preventing post transfusion hepatitis. A number of studies have indicated that blood from commercial blood banks is more likely to transmit disease than blood from voluntary donors, and there is mounting national pressure for an all-volunteer national blood program. Certainly, blood donors with HAA present should be permanently excluded; but it is not yet clear what we are to do with patients who have anti-HAA. More sensitive methodology, careful donor screening and the development of an all-volunteer blood system will help minimize the risk of post transfusion hepatitis, but the growing drug culture and the presence of a greater reservoir of individuals infected with the A virus suggest that hepatitis will not be eliminated in the near future.

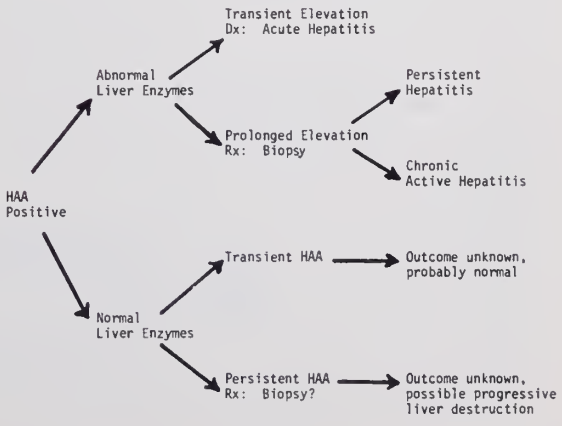
What Should We Do About HAA Carriers?

In Kentucky, it seems that about one in 600 blood donors is an HAA carrier when the CEP methodology is employed. It is likely that more will be found when the more sensitive techniques are applied to donor selection. If normal blood donors are a guide to the population at large, it would appear that a significant number of individuals are HAA carriers. Of special interest to physicians is the fact that employees in the health sciences tend to be HAA carriers much more frequently than the population as a whole, probably due to their frequent exposure to body fluids from patient carriers. When the serum of HAA positive donors is tested, the majority of the donors are found to have normal liver function tests; and the majority of these have persistently positive serum. The long term outcome of this asymptomatic antigenemia is not clear, but preliminary evidence suggests that chronic active liver destruction is present in many. On the other hand, it is not uncommon for patients who are persistently positive to have no evidence of liver disease whatsoever. (Fig. 1)

A smaller number of blood donors with HAA in the serum will be found to have prolonged abnormality of the liver function tests. Biopsy in these patients is indicated and often reveals persistent hepatitis or chronic active hepatitis. Occasionally, the liver function ab-

FIGURE 1

Management of HAA Positive Patients and Donors



normalities are transient and the serum reverts to normal with a negative HAA. These patients do not seem to develop significant liver abnormality.

Because there is evidence that HAA can be spread from carriers by non-parenteral routes and because very small doses can cause disease transmission on parenteral exposure, HAA carriers should be advised to be especially careful about hand washing techniques, sharing razors and needle exposure. Health care workers should probably undergo routine testing so that precautionary measures can be taken in carriers, but there is no current evidence that they should change their careers.

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This Journal feature will be presented alternately by the University of Louisville and the University of Kentucky Departments of Medicine and Departments of Surgery. We hope to have these features revolve around subjects of immediate practical interest to the practicing physician; and, for those of us not able to attend grand rounds in the teaching centers as often as we might, we hope this will represent a bit of a refresher course.

Post Streptococcal Diseases, Part I
Acute Rheumatic Fever

Presentation of Patient: *17-63-19:* A 26-year-old white male was admitted to the hospital with complaints of pain in the knees for two weeks. He had been well until 15 days before hospitalization when he developed pain, swelling and erythema in his right knee. He was given an injection of penicillin, and the swelling disappeared. Ten days before hospitalization, he developed pain and swelling in the left knee and received a second penicillin injection and the swelling again disappeared. Seven days before hospitalization the pain and swelling recurred in his right knee and persisted. In addition, he felt chilly and stayed in bed under the covers for several days. The patient denied recent sore throat, rash or any prior episodes of rheumatic fever. His past history, review of systems and social history were noncontributory. His father was said to have had the same type of arthritis when he was the same age as the patient.

On physical examination, the patient had normal vital signs except for a temperature of 99.6°F. The examination of the heart, chest and abdomen revealed no abnormalities. There were four circular erythematous lesions with a slight scaling crust present on the buttocks and the left posterior thigh. The right knee was warm with moderate effusion and the right ankle was hot and swollen with erythema on the medical aspect. In addition, pain was produced by passive movement of the ankle joint.

The hematocrit was 40%; the white-cell count was 12,600 with 62% neutrophils, 17% band forms, 9% lymphocytes, 8% monocytes, 2% eosinophiles, and 2% basophiles. The erythrocyte sedimentation rate was 40 mm/hr. The urinalysis, blood urea nitrogen, glucose and uric acid determinations were within normal limits. Serological studies for lupus (LE prep.), rheumatoid arthritis (Latex fixation) and syphilis (VDRL) were nonreactive. Antistreptolysin 0 titers on the day of admission and five days later were 250 and 333 Todd units. C reactive protein was present. A joint aspiration of the knee was performed and examination of the fluid revealed 15,200 WBC/cu mm, 90% polys. Uric acid crystals were absent in the joint fluid and no organisms were found by the culture and gram stain of the fluid. Chest x-ray and electrocardiographic examination were within normal limits.

The patient was started on aspirin therapy, 900 mg po q 4 hr and was treated with oral penicillin V 400,000 units q 6 hr for 10 days. The day following aspirin therapy he became afebrile. He was discharged on the seventh day and was placed on daily oral penicillin prophylaxis to prevent subsequent streptococcal infections.

Rheumatic fever has been a steadily disappearing disease in the United States even prior to the availability of effective chemotherapy for streptococcal infections. Even in the post-penicillin era a study based on the San Francisco case registry noted a four-fold decline in the number of initial attacks of rheumatic fever between 1945 and 1955[1]. In addition to its declining incidence, rheumatic fever appears to be declining in severity over the past 60 years

From the Department of Medicine, University of Kentucky College of Medicine, Lexington

as reflected by mortality statistics[2]. The reasons for this are not entirely clear. There has been no apparent change in the streptococcus itself. Countries which have improved their housing conditions have decreased the incidence of rheumatic fever. The most important factor in the acquisition of rheumatic fever appears to be crowding. Studies indicate that when the number of people per bedroom in a house declines, so does the incidence of acute rheumatic fever[3]. When one seeks this disease today, it is to be found in the populations of rural and urban poor and in the military. Military outbreaks although common in World War II are now rare because epidemics can be prevented with injectable respository penicillin. Despite indications of the declining incidence of this disease, national incidence figures are unavailable because the disease is no longer reportable in all states. Even available figures may be inaccurate because of the difficulty in establishing the diagnosis. The diagnosis is made by the presence of a collection of findings which taken separately can be manifestations of other diseases. The Jones Criteria, Revised (Table 1) is presently the best guide in establishing the diagnosis because there is no laboratory test which can identify this disease. The presence of two major criteria or of one major and two minor criteria indicates a high probability of the presence of rheumatic fever if supported by evidence of a previous streptococcal infection. The exceptions are chorea or a low grade carditis which may appear several weeks following the preceding streptococcal infection. These criteria are at best a guide and subject to the interpretation and experience of the physician.

The importance of the group A streptococci in the pathogenesis of acute rheumatic fever (ARF) has been amply demonstrated. Acquisition of any one of the approximately 60 separate serotypes of the group A streptococcus may result in the appearance of acute rheumatic fever. The attack rate is generally less than 2% in untreated non-military populations. This illness differs markedly from post-streptococcal glomerulonephritis (AGN) where only a limited number of serotypes may initiate the renal damage. To date ARF has not followed group A streptococcal pyodermas. But both group A streptococcal pyodermas and pharyngitis have resulted in AGN. The pathogenesis of post-streptococcal AGN will be discussed by Charles Leonard, M.D., in Part II of this program.

The exact medianism which is responsible for the production of ARF by the streptococcus remains unexplained. To date there is no convincing evidence that the direct presence of streptococci is required to initiate the sequence of acute rheumatic fever. Less than 20% of patients harbor group A streptococci in their pharynx at the onset of ARF. Also direct acting cardiotoxins such as streptolysins appear unlikely candidates. Because there is generally a symptom-free period of about 2-1/2 weeks between the streptococcal pharyngitis and the onset of ARF, many investigators have turned to immunologic mechanisms which involve streptococcal products. Unfortunately, this organism has proved to contain a veritable haystack of antigenic products, enzymes and cell wall materials which alone or in combination may initiate the mechanism resulting in ARF. A study by Halbert demonstrated at least 20 immunologically active extracellular products produced by a group A streptococcus[4]. This can be added to the cellular antigens found in the streptococcus itself which are outlined in Table 2.

The theory that ARF is an immunologically mediated disease is based on several observations. One is the similarity seen between ARF and serum sickness. Another is that immunoglublin G (IgG) has been demonstrated bound to cardiac muscle in patients dying with acute rheumatic fever. The most attractive hypothesis advanced to explain the pathogenesis of ARF has been that of the cross-reactive antigen. Streptococcal products have been shown to be

Table 1

REVISED JONES CRITERIA[10]

Major Manifestations		Minor Manifestations
Carditis Polyarthritis Chorea Erythema marginatum Subcutaneous nodules	Clinical	—previous rheumatic fever, arthralgia or fever
	Laboratory	—erythrocyte sedimentation rate, C-reactive protein, leukocytosis, prolonged P-R interval
	PLUS	
Supporting evidence of a preceding streptococcal infection (increased streptococcal antibody, positive throat culture, recent scarlet fever)		

Table 2

COMPOSITION OF THE STREPTOCOCCUS

Location	Component	FUNCTION
Capsule	Hyaluronic acid	impedes phagocytosis not antigenic
Cell Wall	Carbohydrate	distinguishes streptococcal sero-groups (A,B,C, etc)
	M & T proteins	identifies 60+ group A serotypes
	M protein	virulence protein, induces protective antibody
	Mucopeptide	responsible for rigid cell wall
Cell Membrane	Protein, lipid, glusose	separates cell wall from cytoplasm
Cell Cytoplasm	DNA, RNA cell enzymes	machinery for extracellular enzyme and toxin production, cell replication mechanism

immunologically identical with antigens found on heart muscle. Following infection with a group A streptococcus, the patient produces antibody directed to the streptococcus which, however, damages the heart muscle because it possesses an identical antigenic receptor site. Three streptococcal products appear at present to be cross-reactive with human heart muscle. They are cell membrane, cell wall polysaccharide, and an M protein like substance[5-7]. The exact streptococcal product which initiates ARF awaits confirmation by further investigation.

Research into the mechanism of rheumatic fever is continuing and there have been interesting findings reported relatively recently. The first of these findings is that the group A streptococci have been shown to survive up to 30 days intracellularly in tissue culture by apparently reverting to an L form[8]. One may speculate full circle to the hypothesis that possibly the organisms may be causing ARF by direct injury. Their intracellular location would protect them from the effect of penicillin and might prevent their growth on routine culture media. The second relatively recent finding is that streptococcal mucopeptide itself is toxic and induces a necrotic reaction not attributable to humoral or cellular hypersensitivity reactions. Therefore, such an agent would require no immune mechanism to produce cardiac lesions. The third new finding is that in short term studies human blood monocytes were not able to degrade streptococcal cell walls after ingesting them despite the destruction of the organism[9]. This means that the undergraded streptococcal cellular products may remain in the host for weeks and may explain the prolonged course of ARF and the marked tendency to relapse with a repeat streptococcal pharyngitis. The exact mechanism of pathogenesis of this disease continues to elude investigators and new insights and fresh approaches are needed to unravel this complex and intriguing disease.

ROBERT C. NOBLE, M.D.
JAMES R. DZUR, M.D.

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SPECIAL ARTICLES

The Beloved Physician

Branham B. Baughman, M.D.

THE title of this paper was so called by St. Paul (Colossians 4:14). "The Beloved Physician" is the author of the Third Gospel and the book called the Acts of the Apostles. His name is Luke. The Hellenized form is Lukas and the Roman is Lucanus. Our information about him comes from tradition and historical writings.

He was unique in many ways. He was the only non-Hebrew of the four authors of the Christian Gospels. He was the only physician-writer in the New Testament. He was the most intellectual and educated of the four Gospel writers. His Gospel was the only one written as part of a two volume work. He was also a painter and was said to be the first to paint Mary, the mother of Christ.

To place Luke in his proper setting: the Roman Empire had spread over all the shores of the Mediterranean. Of many conquered peoples the disunited Greeks were one group. The Greeks acknowledged Roman law but retained their positions as teachers, traders and professional men. "Conquered Greece still had the victory" (Horace). The Roman peace spread widely and brought prosperity, stability and order only in a superficial sense. The souls of the people were restless. Polytheism, or the Gods of Olympus, persisted as more a social than a religious system. The idea of one God was renewed frequently by cults at the eastern borders of the Empire and even Judaism had to accept many pious Gentiles like the youthful Luke and the centurion in Caesarea called Cornelius.

Luke's family were Greeks who lived in Antioch in Syria where he was born in 17 B.C. His father may have been the freed slave of a Roman family. Luke's education, and that of his family, were probably well advanced. Part of his education may have been rabbinical for he was certainly versed in the Law and the Prophets. He was well versed in Greek and undoubtedly the most learned of all the evangelists. He reports in erudite Greek and avoids and corrects the flaws in grammar and phrasing of the earliest Gospel, that of St. Mark. His style is that of the written word while the other Gospels have that of speech and declamation because the other evangelists were preachers and not men of letters.

We believe he received his medical education in Tarsus, a school which rivaled those of Alexandria and Athens. He probably knew of Hippocrates, the father of medicine who lived and taught on the Greek island of Cos. At Tarsus he may well have met Saul, later St. Paul, a native of that city and a Roman citizen by birth, while Luke attained that dignity by his profession. Tradition says that he first practiced at Antioch. He tells us it was here that the Disciples were first called Christians. Here probably, for the second time, he fell under the spell of St. Paul, joined him and after a delay, perhaps to dispose of his practice, set out in the fall of 50 A.D. to meet St. Paul at Troas, the site of ancient Troy, to begin the first of many journeys as Paul's "beloved physician." From here his account changes in Acts from an impersonal pronoun "they" to the diary form of a companion and eyewitness, "we," (Acts 16:10), going forth to Phillipi in Macedonia, Athens, Corinth and Ephesus, then back to Jerusalem where Paul was in trouble with the Jewish leaders. His next long journey began with Paul's imprisonment, his trials, his appeal to Caesar. They set out under guard for Rome and were shipwrecked at Malta. His account ends two years after their arrival in Rome where Paul was still awaiting his trial and he wrote that "only Luke is with me," (II Timothy 4:11). It may have been there that he wrote his "Gospel as he heard it and the Acts as he had witnessed it" (St.

Jerome). Paul was condemned and executed three miles from Rome at a place on the Ostian Way called Tres Tabernae. From this time on Luke's career is obscure. Tradition says he died at the age of 84 in Bithynia on the Asiatic shore of the Black Sea, and that he was never married. St. Jerome states that his bones, with those of the disciple Andrew, were buried in Constantinople.

A Gospel such as Luke wrote is not like a modern biography and not like a sermon. For the early Christians a Gospel was not something said about Jesus but was something said by Jesus to mankind through His Church. The two Books written by Luke are volumes in a single work, "to contain all things from the very first" to confirm the reader of "the certainty of these things wherein thou hast been instructed." They are intended for general use so that Theophilus, to whom they are dedicated, was probably not a person, but a pun (Theophilus meaning friend or lover of God). However, Theophilus might have been a Roman official known to Luke since he addresses him as "your excellency," a title which in Acts 23:26 he uses in speaking of a Roman Governor (Felix). The two Books are brief, though they contain one-third of the New Testament. The abrupt ending with St. Paul "still preaching the kingdom of God and teaching those things which concern the Lord Jesus Christ with all confidence, no man forbidding him," suggests that a third volume was projected. It is unlikely that it was written. Perhaps his Greek sense of the fitness of things was so outraged by the fatal judgement of Nero's court at the second trial of his friend and patient that he had no heart to continue the record.

Howard Kelly of Baltimore, wrote "the first four verses of the Third Gospel of 42 words in the Greek (82 in English) exhibit more competency as a witness and greater accuracy and conviction as to the truth of what he is about to write, than any equal number of words ever written and that without the slightest apparent effort."

His Greek origin again is shown in his description at the Crucifixion of weeping women who lament for Jesus (Luke 23: 27, 48), typical of Greek tragedy. The fact that most Greeks thought anyone else a barbarian emphasizes St. Luke's uncanny empathy. He is the only one to tell the story of the Good Samaritan, since Samaritans were looked down upon by the Jews as well as Greeks. This characterizes his spirit and is in keeping with the highest traditions of our profession.

The life of St. Luke is of particular interest to physicians because he was one of us. He was so called by St. Paul, but more so, his writings are proof of his profession. St. Mark, the author of the second Gospel which actually was the earliest of the four, and one of Luke's sources, says "a certain woman which had an issue of blood 12 years and had suffered many things of many physicians and had spent all that she had and *was nothing bettered* but rather grew worse." Luke says "a woman having an issue of blood 12 years, which had spent all her living upon physicians, neither could she be healed of any." He, therefore, corrects a criticism blamed upon the profession too often for not doing that which no one can do. Again, Mark tells of a man with a withered hand; Luke says it was his right hand. In his story of the Good Samaritan he says he poured oil and wine on his wounds. Laymen used only oil; physicians used wine for the action of alcohol. Mark tells of a man with an unclean spirit who came out of the tombs. Luke describes the insanity by noting that he had for a long time worn no clothes nor abode in any house. He gives a thorough description of the case of the father of Publius on Malta who "lay sick of a fever and of a bloody flux." Luke also describes a man with dropsy who was healed on the Sabbath, (Luke 14:1-6). The night Christ was arrested one of his followers cut off the right ear of one of the accusers. Only Luke stated that it was healed by the Lord Jesus. Another argument for his profession is the occasional use of medical words in a non-medical sense, as when he tells of strengthening the ship during the storm. He uses a word which means splinting, as in surgery (undergirded). His description of the birth of Jesus, the only one of the four Gospels, is a physician's masterpiece. His feast day is October 18. He is appropriately remembered because most of what we associate with Christmas is of his telling: the Annunciation by the

Angel, Mary's hymn of praise, the Magnificat, Mary's visit to Elizabeth, the scene at Bethlehem and the story of the shepherds.

He was a devoted and learned man and a physician who, although he left his profession, never forsook it. He became from a physician of the body, a physician of the soul and as often as his Books are read in the Church so often does his medicine flow out. Because he wrote with the mind and ordered manner of a scientifically trained intellectual Greek, his writings had the greatest possible influence through successive generations. He may well have been the unnamed companion of Cleopas on the road to Emmaus to whom Christ appeared after the Resurrection. He may also have been one of the 75 sent out to do Christ's work.

The Mass of his feast has the appropriate phrase: "To me O God how wonderful are thy friends! Their power is exceedingly strong!"

In Memoriam

There, till the vision he foresaw
Splendid and whole arise,
And unimagined Empires draw
To council 'neath his skies,
The immense and brooding Spirit still
Shall quicken and control.
Living he was the land, and dead,
His soul shall be her soul!

Rudyard Kipling

This tribute is printed in memory of the Kentucky physicians who died during the past year.

Deceased Kentucky Physicians

1972

Gustave Grauman Altman, Louisville
Shelby Garnett Bale, Elizabethtown
Byron C. Beard, Whitesburg
H. Carl Boylen, Carrollton
George B. Breidenthal, Louisville
James Woodall Bryan, Louisville
Thomas Irvine Campbell, Lebanon
Foster Douglas Coleman, Louisville
Leonard Tomb Davidson, Louisville
James W. Dorton, Louisville
Verne V. Eskridge, Owensboro
Earl Jaekson Eversole, Louisville
Edward C. Frank, Louisville
R. Arnold Griswold, Louisville
Gerald Hart, Louisville
Philip Eggleston Haynes, Louisville
Amalia Hiekman, Alexandria
Preston Thomas Higgins, Hopkinsville
Rex L. Huff, Elizabethtown
Wendell Hurt, Tompkinsville
Franklin Jelsma, Louisville
Lycurgus E. Johnson, Russellville
Sydney Evans Johnson, Louisville
Albert Earle Leggett, Louisville
William T. Maxson, Lexington
Thomas Harlan Milton, Owensboro
Israel Muss, Louisville
Adam Granode Osborne, Pikeville
Aliee Neweome Pickett, Louisville
Byron Naylor Pittenger, Paris
John G. Rulander, Louisville
Max C. Salb, Kuttawa
Aaron Allen Shaper, Louisville
Higa Roseoe Skaggs, Ashland
Bernard Bland Sleadd, Middletown
Vineent Stabile, Louisville
James Vietor Stark, Kirksey
Russell E. Teague, Frankfort
C. Dwight Townes, Louisville
Harold Adrian Tueh, Covington
William Lee Tyler, Jr., Owensboro
Aliee L. Wakefield, Louisville
Benjamin Hubert Warren, Owensboro
Ralph Westervelt, Elkhorn City
James H. Whitson, Slaughter

List of names of deceased physicians available to The Journal as of November 10, 1972.

EDITORIALS

Our Thanks

THE *Journal* will celebrate its seventieth Christmas this month. For all of us, the past year has been an eventful one; we welcome the year-end holiday season as a bit of a respite, and a chance to review our course. We, at *The Journal of the Kentucky Medical Association,* recognize how much we are indebted to others for the success of this past year; and take pleasure in acknowledging their contributions herewith.

Nineteen seventy-two saw the retirement from our *Journal* Board, after 17 years of truly devoted service, of Doctor Sam A. Overstreet. The sharp pangs induced by his departure have been lessened somewhat, however, by our acquisition of Doctor A. Evan Overstreet as Assistant Editor.

Many fine scientific articles have been published. "Medical Progress" and "Grand Rounds" have continued to bring us current concepts from the groves of academe. The scientific editorial consultants, in reading and commenting on papers submitted, have strengthened the core around which this *Journal* is built.

Several physicians have contributed special articles, some have been regular columnists, and many have helped us along with news items of interest. To these doctors we are indebted.

For their advice and counsel we extend our appreciation to the administration and faculty of each of the medical schools in Kentucky. They form a base upon which our medical culture, heritage and education can grow, and they have been consistently helpful and cooperative. For this pleasant relationship we are grateful.

To the companies whose advertising has been presented on these pages, we offer our thanks for their confidence and support. Such support enables us to present, with reasonable economy, the on-going story of Kentucky medicine to its participants—you, the physicians of this State. We appreciate that opportunity.

To all these people—to all involved in any way in the fascinating and complex process of medical care in Kentucky this past year—we say well done. Thank you for your efforts. May your frustrations diminish and your peace of mind increase.

WHj

Merry Christmas

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Our Sincere Thanks and Best Wishes for a Merry Christmas and a Happy New Year

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ORGANIZATION SECTION

Foundation Board Elects Officers for 1972-73

The Board of Directors of the Kentucky Foundation for Medical Care met for the first time during this Associational year on October 25. This Board, appointed by the KMA Board of Trustees, is responsible for conducting all organizational matters of the Foundation.



Doctor Hull

Members of the Board for the 1972-73 Associational year include all KMA officers, plus nine other KMA members and the Executive Director of KMA.

David A. Hull, M.D., Lexington, was elected by the Foundation Board as President. Other officers elected were: W. Neville Caudill, M.D., Louisville, Vice-President; Paul J. Parks, M.D., Bowling Green, Treasurer, and Robert G. Cox, Louisville, Secretary. All officers will serve a one year term.

In addition to the election of officers, an executive committee was appointed consisting of the Foundation President, Vice-President, Secretary, Treasurer and Robert N. McLeod, Jr., M.D., Somerset, Chairman of the KMA Board of Trustees, who is an ex officio member of the Foundation Board.

In other action, the Board considered recommendations from an ad hoc planning committee. This group was established to review all Foundation activities and to suggest immediate and long-range objectives. Their recommendations included more intense efforts in peer review, particularly in utilization review; consideration of methods to procure continuous operational funding and the establishment and guidance of a statewide health care project.

Members of the Foundation Board noted that each KMA member has input into the Foundation through the KMA Board of Trustees. In accordance with Foundation Bylaws, two-thirds of the Board of Directors are KMA officers and trustees. The Board encourages each KMA member to contact his respective trustee if he wishes to present a matter to the Foundation for consideration.

ACS Honors Dr. Polk For Surgical Film

Hiram C. Polk, Jr., M.D., Louisville, was recently honored for his work in authoring the film "Transthoracic and Transabdominal Nissen Operation for Reflux Esophagitis," which was shown to some 14,000 surgeons and guests attending the 58th annual Clinical Congress of the American College of Surgeons.

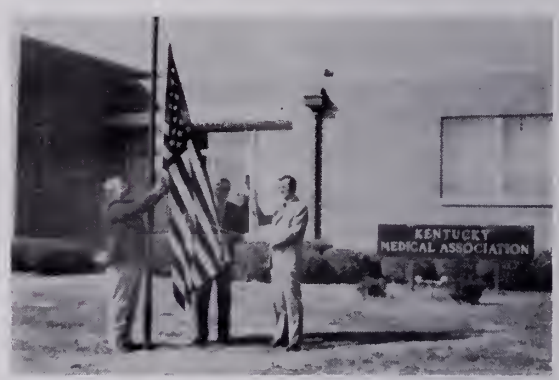
Doctor Polk, who is professor and chairman of the University of Louisville School of Medicine Department of Surgery, received a commemorative plaque for the 25-minute film which demonstrates his extensive work in this field of surgery. The motion picture was produced earlier this year by a surgical film team from Davis and Geck of Danbury, Connecticut.

Family Practice Board Schedules Next Exam

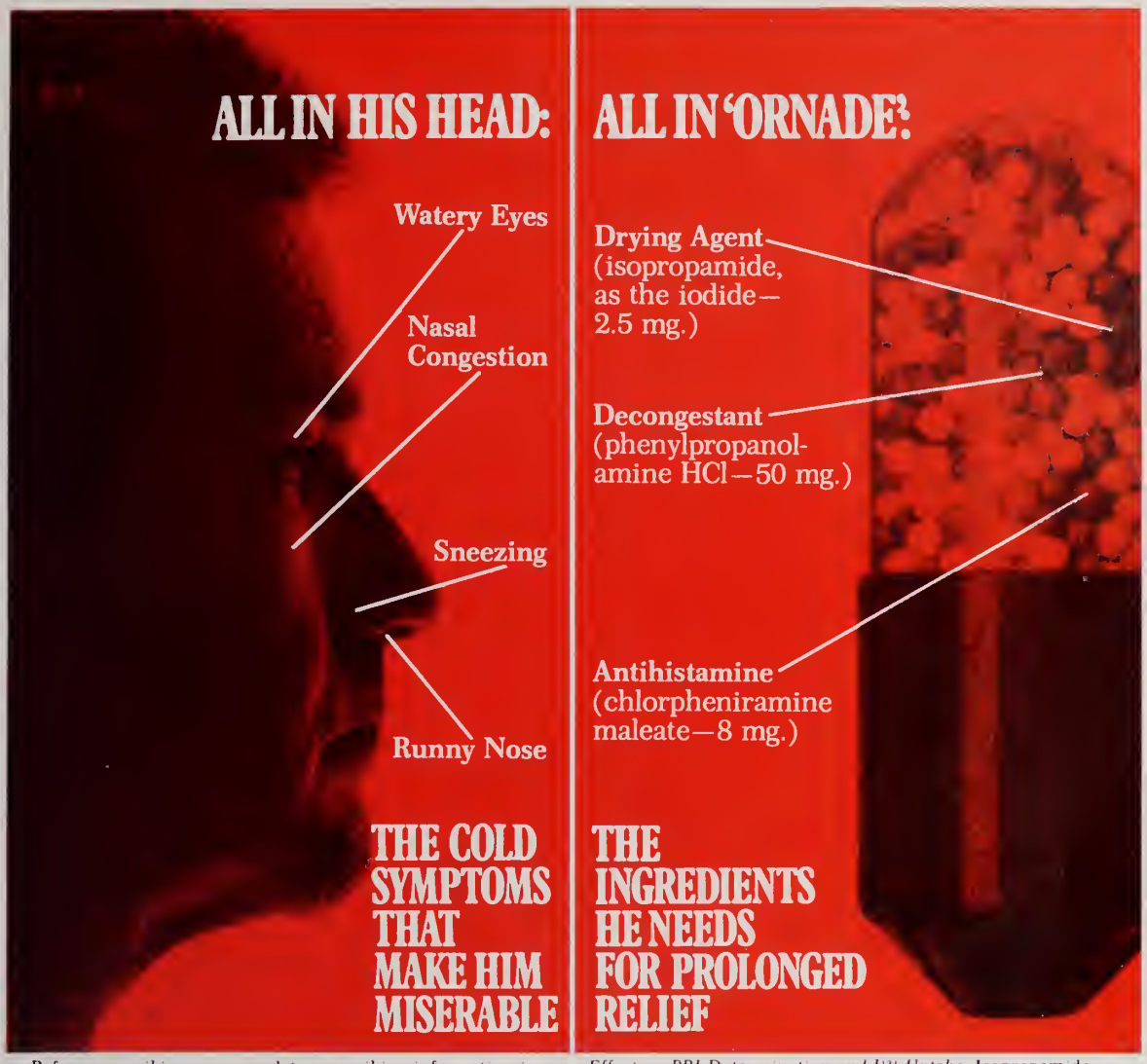
The American Board of Family Practice announces that it will give its next two-day written certification examination on October 20-21, 1973. It will be held in various centers geographically distributed throughout the United States. Information regarding the examination can be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary
American Board of Family Practice, Inc.
University of Kentucky Medical Center
Annex #2, Room 229
Lexington, Kentucky 40506

It is necessary for each physician desiring to take the exam to file a completed application with the Board office. Deadline for receipt of applications in the office of Doctor Pisacano is August 1, 1973.



Three officers of the Kentucky Medical Association prepare to hoist a flag in front of the KMA Headquarters Office building. The flag, which originally was flown over the nation's Capitol, was presented to KMA by Fifth District U.S. Representative Tim Lee Carter (R-Tompkinsville). KMA President Lee C. Hess, M.D., Florence (left) is aided by Board Chairman Robert N. McLeod, Jr., M.D., Somerset (center) and Fred C. Rainey, M.D., Elizabethtown, President-Elect.



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The following patient profiles represent typical clinical situations, but do not necessarily represent actual cases.

Age 22, previously normal mense with occasional menorrhagia. Nov on a sequential O.C. for four mont Complains of heavy flow, occasional intracyclic bleeding, edema, tender swollen breasts.

Indicates estrogen excess.

1st choice: Switch to a combination 50-mcg.-estrogen O.C. (such as **Demulen**®).

Age 19, small breasts, minor hirsutism, oily hair and skin. History of metrorrhagia, skipped or scanty menses. New user.

Indicates androgenic excess or estrogen deficiency (fertility is suspect).

1st choice: An estrogen-dominant O.C. (such as **Enovid-E**®).

Age 25, average frame, poor complexion. No problem with menses, normal para 1. On a low-estrogen/high-progestogen O.C. for two years. Now complains of scanty flow, decreased libido, depression.

Indicates probable buildup of progestogen-related side effects.

1st choice: Switch to a center-spectrum O.C. with more estrogen, less progestational activity (such as **Ovulen**®).

Age 21, short, mammose, with normal menses, some acne. Was put on prenuptial regimen of 50-mcg.-estrogen/moderate-progestogen O.C. for two months. Now has increased acne.

Indicates metabolic production of androgen or relative estrogen deficiency.

1st choice: Switch to a 100-mcg.-estrogen combination (such as **Enovid-E**® or a sequential).



Unmasked, physiologically and anatomically, they're not all the same. A basic difference lies in their hormone profiles. One may secrete too much estrogen, another not enough...or perhaps too much androgen; the vast majority would fit somewhere into the broad center spectrum.

Although the profiles described below may not be completely predictive, in optimal O.C. selection, the estrogen-progestogen activity ratio should be carefully matched to the patient profile. Searle offers you O.C.s in a range not only suitable for your patients in the balanced center spectrum, but also adaptable to the patient with another type of hormone profile.

Oral contraceptives are complex medications. Among the commonly reported adverse reactions are: intracycle bleeding, fluid retention, tender or swollen breasts, exacerbation of acne condition, changes in libido, amenorrhea while on medication and upon discontinuance, nausea, leg cramps, headaches, weight gain. Therefore, after reference to the prescribing information, oral contraceptives should be prescribed with care.

*Note: In some patients any level of exogenous estrogen or progestogen may produce symptoms of excess hormone activity.

Age 25, tall, slender, athletic, with flat chest. On a progestogen-dominant 50-mcg.-estrogen O.C. Has recurrent trichomoniasis and Monilia.
Indicates estrogen deficiency and excess of progestogen in current O.C.
1st choice: Switch to a combination pill with 100 mcg. estrogen and less progestational activity (such as **Enovid-E**® or **Ovulen**® or a sequential).

Age 23, "Miss America" figure, previously normal menses, healthy skin and hair. On a 50-mcg.-estrogen pill for four months. Complains of intracyclic bleeding.
Indicates probable need for more estrogen.
1st choice. Switch to a center-spectrum O.C. with more estrogen and moderate progestogen dominance (such as **Ovulen**®).

Age 21, college senior, average build. On highly progestogen-dominant/low-dose-estrogen O.C. for six months. Now complains of amenorrhea, between-cycle headaches, weight gain.
Indicates probable progestogen excess.
1st choice: Switch to a center-spectrum pill (such as **Ovulen**®).

Age 27, slightly overweight, multiparous. Nausea with all three pregnancies and with a sequential O.C. three years ago. Has premenstrual fluid retention and leg cramps.
Indicates probable excess of estrogen.
1st choice: A 50-mcg.-estrogen/progestogen-dominant pill (such as **Demulen**®).



Ovulen® a balanced center-spectrum O.C. for most

Each white tablet contains ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen® a moderately progestogen-dominant O.C. for many

Each white tablet contains ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.
Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.
Both Ovulen and Demulen are available in 21- and 28-pill schedules.

SEARLE Products of SEARLE & CO.
San Juan, Puerto Rico 00936

Enovid-E® a moderately estrogen-dominant O.C. for some

Each tablet contains norethynodrel 2.5 mg./mestranol 0.1 mg.

SEARLE Product of Searle Laboratories Division
G.D. SEARLE & CO.
P.O. Box 5110, Chicago, Illinois 60680
Where "The Pill" Began

For a brief summary of prescribing information, please see next page.

a family of O.C. products to help you match the right pill to the right patient

Ovulen®

Each white tablet contains
ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen®

Each white tablet contains
ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain[1-3] leading to this conclusion, and one[4] in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll[3] was about seven-fold, while Sartwell and associates[4] in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations preexisting uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X, thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T^3 uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. *13*:267-279 (May) 1967. **2.** Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. *2*:193-199 (April 27) 1968. **3.** Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. *2*:651-657 (June 14) 1969. **4.** Sartwell, P. E.; Masi, A. T.; Arthes, F. G., Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives. An Epidemiologic Case-Control Study, Amer. J. Epidem. *90*:365-380 (Nov.) 1969.

SEARLE Products of SEARLE & CO.
San Juan, Puerto Rico 00936

Enovid-E®

norethynodrel 2.5 mg./mestranol 0.1 mg.

Actions—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Indication—Enovid-E is indicated for oral contraception.

The *Special Note, Contraindications, Warnings, Precautions* and *Adverse Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

Enovid-E®

brand of norethynodrel with mestranol

SEARLE Product of Searle Laboratories Division
G.D. SEARLE & CO.
P.O. Box 5110, Chicago, Illinois 60680
Where "The Pill" Began

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The Hawkins Brown Memorial Meeting of The Kentucky Medical Association

Grand Ballroom, Stouffer's Louisville Inn, Louisville, Kentucky, September 19-21, 1972

Digest* of Proceedings of the Regular Sessions of the

HOUSE OF DELEGATES

Richard F. Greathouse, M.D., Louisville

Speaker of the House, Presiding

First Session

Speaker Greathouse called the 122nd Meeting of the KMA House of Delegates to order at 9:20 a.m. and asked Paul Parks, M.D., Bowling Green, to give the invocation. He then called on Emmett W. Wood, M.D., Bardstown, Chairman of the Credentials Committee, to give the report of the Credentials Committee. Doctor Wood reported that a quorum was present. A motion was made, seconded, and passed that the minutes of the 1971 session of the House of Delegates be approved as published in the December, 1971, *Journal of the Kentucky Medical Association.*

S. R. Scheen, M.D., Louisville, Secretary, presented the general announcements. He called attention to the scientific sessions beginning at 8:50 a.m. on Tuesday, September 19, at the Convention Center. He emphasized that the highlight of the meeting, the President's Luncheon, would be held on Wednesday in the Grand Ballroom of Stouffer's Louisville Inn and feature Mr. Mark Russell, political satirist. Doctor Scheen reminded the delegates that the Nominating Committee for general officers would meet at the close of this first session of the House and that the reference committees would convene at 2:00 p.m., Monday, in various rooms of Stouffer's Inn. To conclude his announcements, Doctor Scheen reminded the delegates to use the Message Center and to visit the technical and scientific exhibits.

Doctor Scheen then read the list of physicians who had died since the 1971 meeting of the House of Delegates, following which the members of the House stood for a moment of silent tribute. The names of these physicians, their locations and dates of death were given as follows:

Altman, Gustave Grauman	Louisville	May 4, 1972
Bale, Shelby Garnett	Elizabethtown	June 22, 1972
Beard, Byron C.	Whitesburg	Dec. 24, 1971
Boylen, H. Carl	Carrollton	Dec. 1, 1971
Breidenthal, George B.	Louisville	Dec. 14, 1971
Campbell, Thomas Irvine	Lebanon	May 25, 1972
Chambers, John S.	Lexington	Oct. 9, 1971
Coleman, Foster Douglas	Louisville	April 29, 1972
Davidson, Leonard Tomb	Louisville	Nov. 13, 1971
Dorton, James W.	Louisville	April 27, 1972
Eskridge, Verne V.	Owensboro	Jan. 18, 1972
Eversole, Earl Jackson	Louisville	Dec. 2, 1971
Griswold, R. Arnold	Louisville	May 1, 1972
Hart, Gerald	Louisville	May 25, 1972
Haynes, Philip Eggleston	Louisville	Feb. 26, 1972
Hickman, Amalia	Alexandria	Jan. 3, 1972
Higgins, Preston Thomas	Hopkinsville	April 16, 1972
Huff, Rex L.	Elizabethtown	Nov. 29, 1971
Hurt, Wendell	Tompkinsville	Jan. 29, 1972
Johnson, Lycurgus E.	Russellville	May 18, 1972
Leggett, Albert Earle	Louisville	July 17, 1972
Lewis, Chester R.	Georgetown	Nov. 8, 1971
Maxson, William T.	Lexington	Aug. 13, 1972
Milton, Thomas Harlan	Owensboro	June 21, 1971
Muss, Israel	Louisville	Mar. 20, 1972
Osborne, Adam Granode	Pikeville	June 20, 1972
Pickett, Alice Newcome	Louisville	Nov. 17, 1971
Pittenger, Byron Naylor	Paris	July 25, 1972
Roston, Sidney	Louisville	Aug. 28, 1971
Rulander, John G.	Louisville	July 30, 1972
Salb, Max C.	Kuttawa	April 19, 1972
Shaper, Aaron Allen	Louisville	Dec. 21, 1971
Skaggs, Higa Roscoe	Ashland	1971
Sleadd, Bernard Bland	Middletown	May 15, 1972
Stark, James Victor	Kirksey	1972
Tanner, Jacob Leland	Henderson	Sept. 28, 1971
Teague, Russell E.	Frankfort	Aug. 9, 1972
Townes, C. Dwight	Louisville	Jan. 22, 1972
Tuch, Harold Adrian	Covington	Jan. 1972
Tyler, William Lee, Jr.	Owensboro	Sept. 3, 1971
Wakefield, Alice L.	Louisville	May 3, 1972
Warren, Benjamin Hubert	Owensboro	Dec. 1, 1971
Wathen, Charles A.	London	Feb. 8, 1971
Westervelt, Ralph	Elkhorn City	Dec. 11, 1971
Whitson, James H.	Slaughter	Dec. 19, 1971
Woodson, Turner Ashby	Fairhope, Ala.	Oct. 11, 1971

Doctor Greathouse then announced the Reference Committee appointments as follows:

Reference Committee No. 1

Harold L. Bushey, M.D., Barbourville, Chairman
L.F. Beasley, M.D., Franklin
Eugene H. Conner, M.D., Louisville
William E. Pearson, Jr., M.D., Owensboro
John E. Trevey, M.D., Lexington

Editorial Note: A tape recording was made of the two sessions of the House of Delegates, and any member who desires to examine the transcript of these proceedings may visit the Headquarters Office and listen to the recording.

Reference Committee No. 2

Peter P. Bosomworth, M.D., Lexington, Chairman
C. Douglas Le Neave, M.D., Mayfield
Earl P. Oliver, M.D., Scottsville
Charles A. Webb, M.D., Ashland
Lloyd G. Yopp, M.D., Louisville

Reference Committee No. 3

John S. Oldham, M.D., Owensboro, Chairman
Robert G. Overstreet, M.D., Louisville
Harvey A. Page, M.D., Pikeville
James G. Wilhite, M.D., Lexington
William R. Yates, M.D., Hebron

Reference Committee No. 4

Clinton Ray Potts, M.D., Louisville, Chairman
John M. Baird, M.D., Danville
James B. Holloway, M.D., Lexington
William N. Richardson, M.D., Cadiz
Ronald E. Waldridge, M.D., Shelbyville

Reference Committee No. 5

Richard B. McElvein, M.D., Lexington, Chairman
Keith M. Coverdale, M.D., Bowling Green
Kenneth P. Haywood, M.D., Earlington
David C. Shipp, M.D., Louisville
Walter H. Stepchuck, M.D., Harlan

Reference Committee No. 6

Glenn W. Bryant, M.D., Louisville, Chairman
Mort H. Moseley, M.D., Eddyville
A.B. Richards, M.D., Louisa
Robert E. Smith, M.D., Covington
Raymond D. Wells, M.D., Inez

Special Reference Committee on Resolution H

W. Neville Caudill, M.D., Louisville, Chairman
Leslie W. Blakey, M.D., Lexington
Kenneth M. Eblen, M.D., Henderson
Lowell D. Martin, M.D., Martin
Robert E. Robbins, M.D., Elizabethtown

The Speaker reported that the tellers for the meeting would be A.B. Richards, M.D., Louisa, Chairman; John D. Allen, Jr., M.D., Louisville, and William Powers, M.D., Hawesville.

The reports of the officers and committees were presented by the Speaker and then referred to the respective reference committees as follows: (Only the reports of the officers were read.)

Report of the President—Reference Committee No. 1.

At this time, Doctor Harter combined his Annual Report of the President and the Presidential Address into one presentation.

Report of the President, Woman's Auxiliary to KMA—Reference Committee No. 1.

Report of President-Elect—Reference Committee No. 1.

Report of the Speaker of the House—Reference Committee No. 1.

Report of the Chairman, Board of Trustees—Reference Committee No. 1 with the following exceptions: Paragraph 8 on page 11 and paragraph 3 on page 12 of the reports booklet referred to the Special Reference Committee on Resolution H; Paragraphs 1 and 6 on page 12 referred to Reference Committee No. 6; paragraph 4 on page 12 referred to Reference Committee No. 4.

Report of the Secretary—Reference Committee No. 1.

Report of the Editor—Reference Committee No. 1.

Report of the Treasurer—Reference Committee No. 1.

Report of the Delegates to AMA—Reference Committee No. 1.

Report of the Executive Director—Reference Committee No. 1.

At this time, Doctor Greathouse announced that in keeping with a Board of Trustees recommendation, the president of each of the Student AMA Chapters had been invited to present an oral report to the House. He reported that the President of the University of Kentucky College of Medicine SAMA Chapter, Mr. William Baumgartner, was unable to attend the meeting and was being represented by Mr. Bruce Coyer, who gave the report. Doctor Greathouse then called Mr. Thomas J. Wieman, President of the University of Louisville School of Medicine SAMA Chapter, to the podium for his report. Both reports were well received and Doctor Greathouse commended them on their reports.

Also at this time, Doctor Greathouse introduced to the House a representative of AMA attending this meeting and long-time friend of Kentucky, Doctor James Sammons of Baytown, Texas, who is Vice-Chairman of the Board of Trustees of the American Medical Association. Doctor Sammons was then called to the podium for a few brief comments.

The Kentucky State Association of Medical Assistants served coffee and sweet rolls to the members of the House at 10:25 a.m. on the mezzanine floor of Stouffer's Inn.

The Speaker then continued with the referrals of reports to the reference committees.

Report of the Judicial Council—Reference Committee No. 6.

Report of the Kentucky Foundation for Medical Care—Reference Committee No. 4.

Report of the Rural Kentucky Medical Scholarship Fund—Reference Committee No. 6.

Report of the Board of Directors, Kentucky Physicians Mutual, Inc.—Reference Committee No. 4.

Report of the Scientific Program Committee—Reference Committee No. 2.

Report of the Scientific Exhibits Committee—Reference Committee No. 2.

Report of the Hospital Committee—Reference Committee No. 2.

Report of the Committee on Educational Television—Reference Committee No. 2.

Report of the Disaster Medical Care Committee—Reference Committee No. 2.

Report of the Advisory Committee to Blue Shield—Reference Committee No. 4.

Report of the Advisory Committee to Blue Cross—Reference Committee No. 4.

Report of the Liability Insurance Committee—Reference Committee No. 5.

Report of the Committee on Business Management and Services—Reference Committee No. 5.

Report of the Committee on Occupational Health, Physical Medicine and Rehabilitation—Reference Committee No. 3.

Report of the Maternal Mortality Study Committee—Reference Committee No. 3.

Report of the Advisory Committee to Selective Service—Reference Committee No. 5.

Report of the Committee to Study the Constitution and Bylaws—Reference Committee No. 6.

Report of the Interim Meeting Program Committee—Reference Committee No. 6.

Report of the McDowell House Board of Managers—Reference Committee No. 6.

Report of the Memorials Commission—Reference Committee No. 6.

Report of the Committee on Legislative Activities—Reference Committee No. 3.

Report of the Committee on Orientation—Reference Committee No. 6.

Report of the Committee on Community and Rural Health—Reference Committee No. 4.

Report of the Committee on Environmental Quality—Reference Committee No. 3.

Report of the Committee on Cults—Reference Committee No. 3.

Report of the Committee on Health Care of the Poor—Reference Committee No. 4.

Report of the Committee on School Health, Physical Education and Medical Aspects of Sports—Reference Committee No. 4.

Report of the Advisory Committee to Woman's Auxiliary—Reference Committee No. 1.

Report of the Committee on Public Relations—Reference Committee No. 4.

Report of the Coordinating Commission on Governmental Medical Services—Reference Committee No. 5.

Report of the Technical Advisory Committee on Physicians Services (Title XIX)—Reference Committee No. 5.

Report of the Advisory Committee on Title XVIII (Social Security Act)—Reference Committee No. 5.

Report of the Committee on Appalachian and OEO Programs—Reference Committee No. 5.

Report of the Continuing Medical Education Committee—Reference Committee No. 2.

Report of the Committee on Plans and Development—Reference Committee No. 6 with the following exception: Paragraph 11 on page 53 referred to Reference Committee No. 2.

Report of the Interspecialty Council—Reference Committee No. 3.

Report of the Committee on Medicine and Religion—Reference Committee No. 2.

New Business

New Business was presented to the House by the Speaker and referred to reference committees indicated as follows:

(A) Resolution from KMA Board of Trustees concerning Utilization of Peer Review Mechanisms—Reference Committee No. 4.

(B) Resolution of KMA Board of Trustees pertaining to the Cost of Hospital Care—Reference Committee No. 4.

(C) Resolution of KMA Board of Trustees concerning Establishment of On-Call Rosters in Hospitals—Reference Committee No. 2.

(D) Resolution introduced by David B. Stevens, M.D., concerning Self-Assessment Testing—Reference Committee No. 2.

(E) Resolution from Fayette County Medical Society regarding Remuneration for Insurance Reports—Reference Committee No. 4.

(F) Resolution of KMA Committee on Legislative Activities concerning Medicredit—Reference Committee No. 3.

(G) Resolution introduced by Editors of KMA Journal concerning Sam A. Overstreet, M.D.—Reference Committee No. 1.

(H) Resolution from KMA Board of Trustees regarding Reconsideration of Resolution H (1972)—Special Reference Committee on Resolution H.

Resolution from Nelson County Medical Society regarding Third Party Payment Plans—Special Reference Committee on Resolution H.

There was considerable discussion concerning Resolution H as introduced by Nelson County in 1971 and the Board of Trustees Resolution H of 1972 asking for redirection and reclarification. The Speaker stated that unless there was a dissenting vote within the House that Resolution H as introduced by the Board of Trustees to reconsider Resolution H 1971 would be submitted to the Special Reference Committee on Resolution H for action. This was done as there was no opposition voiced in the House.

(I) Resolution introduced by Madison County Medical Society pertaining to Professional Standards for Athletic Trainers—Reference Committee No. 4.

(J) Resolution of Daryl P. Harvey, M.D., of Barren County, regarding Free Enterprise Medical Care

Committee—Reference Committee No. 4.

(K) Resolution introduced by W. Neville Caudill, M.D., Jefferson County, concerning Actions Taken by the Williams and Wilkins Company—Reference Committee No. 1.

(L) Resolution of Campbell-Kenton County Medical Society regarding Concern Regarding State Hospitals by the Council of the Kentucky Psychiatric Association—Reference Committee No. 4.

(M) Resolution from Jefferson County Medical Society pertaining to Needless Administrative and Non-medical Nursing Home Visits—Reference Committee No. 5.

(N) Resolution introduced by Jefferson County Medical Society pertaining to Judicial Council Ruling on Contraceptive Advice—Reference Committee No. 6.

(O) Resolution from KMA Board of Trustees pertaining to Peer Review Committees—Reference Committee No. 4.

(P) Resolution of Fayette County Medical Society concerning Disagreements over Fees—Reference Committee No. 4.

(Q) Resolution of Fayette County Medical Society regarding Mental Health-Mental Retardation Centers —Reference Committee No. 5.

At this time, David B. Stevens, M.D., of Fayette County, introduced a new item of business proposing an amendment to the Constitution and Bylaws by deletion of a sentence in Chapter VII, Section 2, which reads as follows: "All questions of an ethical nature brought before the House of Delegates shall be referred to the Judicial Council without discussion." He then proposed addition of a new Section 10 to read as follows: "All questions of an ethical nature as proposed by the Judicial Council should be ratified by the House of Delegates before becoming accepted policy of the Association."

Vice-Speaker Cooper announced the meeting places for the nominating committees for general officers and the five trustee districts electing trustees and alternates this year. Doctor Cooper stated that the Nominating Committee would report immediately following the close of the first scientific session on Tuesday morning at the Convention Center as well as at the second meeting of the House on Wednesday. In accord with the Bylaws, nominations may be made from the floor on Wednesday without discussion or comment. Doctor Cooper then named the physicians on the Nominating Committee as follows: Harold L. Bushey, M.D., Barbourville, Chairman; Coy E. Ball, M.D., Owensboro; Thomas L. Heavern, Jr., M.D., Highland Heights; Robert L. McClendon, M.D., Louisville, and Nelson B. Rue, M.D., Bowling Green. In completing his announcements, Doctor Cooper reminded the Reference Committee Chairman of their noon luncheon.

The first session of the House of Delegates was adjourned at 12:10 p.m.

Second Session

Speaker Greathouse called the second session of the House of Delegates to order on September 20, 1972, at 7:30 p.m., and the invocation was given by Paul J. Parks, M.D., Bowling Green. Doctor Wood reported that a quorum was present.

David A. Hull, M.D., Lexington, Chairman of the Board of Trustees, was then recognized to present the final report of the Board. He read the following resolution, which was passed by the Board at its September 20 meeting, and moved its adoption. The motion was seconded and carried.

> WHEREAS, the 1972 KMA Annual Meeting has made a substantial contribution in the field of continuing medical education and has been well received, and
>
> WHEREAS, many individuals, organizations and agencies including guests, and state essayists, scientific and technical exhibitors, newspapers, radio and television stations, hotels, and the Convention Center, have contributed to its success, therefore be it
>
> RESOLVED, that this House of Delegates go on record as expressing its deepest appreciation to all individuals and organizations who have had a part in the development and implementation of the 1972 Annual Meeting.

Following this action, Doctor Scheen was called to the podium, and he gave special recognition to the representatives of the surrounding state medical associations who attended KMA's Annual Session. These were: Peter R. Petrich, M.D., President, Indiana State Medical Association; Walter T. Gunn, M.D., President, Missouri State Medical Association; James L. Henry, M.D., Secretary-Treasurer, Ohio State Medical Association; William T. Satterfield, M.D., President, Tennessee Medical Association; William H. Hotchkiss, M.D., President, Medical Society of Virginia; Worthy W. McKinney, M.D., President, West Virginia State Medical Association. Doctor Scheen also recognized James H. Sammons, M.D., Vice-Chairman of the Board of Trustees of the American Medical Association, and Richard H. Swigart, Ph.D., the new Dean of the University of Louisville School of Medicine.

The Speaker then stated that the reports of the reference committees would now be read.

REFERENCE COMMITTEE NO. 1*

Harold L. Bushey, M.D.,
Barbourville, Chairman

Reference Committee No. 1 considered the following reports:

1. Report of the President
2. Report of the President, Woman's Auxiliary to KMA
3. Report of the President-Elect
4. Report of the Speaker of the House
5. Report of the Chairman, Board of Trustees
   - All matters relating to Resolution H are referred to the Special Reference Committee on Resolution H. These include Paragraph 8 on Page 11 and Paragraph 3 on Page 12.
   - Paragraph 1 on Page 12 relating to the Building Committee and Paragraph 6 on Page 12 relating to the Ad Hoc Committee on Orientation referred to Reference Committee No. 6.
   - Paragraph 4 on Page 12 relating to the Ad Hoc Committee on Electronic Data Processing referred to Reference Committee No. 4
6. Report of the Secretary
7. Report of the Editor
8. Report of the Treasurer
9. Report of the Delegates to AMA
10. Report of the Executive Director
38. Report of the Advisory Committee to the Woman's Auxiliary
   - Resolution G—Sam A. Overstreet, M.D., (Editors of KMA Journal)
   - Resolution K—Actions taken by the Williams and Wilkins Company (W. Neville Caudill, M.D.)

Report of the President

This year as President of the Kentucky Medical Association has convinced me that there is a definite effort of the politicians of this country to control American medicine. I had read with mild interest the reviews of several books criticizing American medicine based on the World Health Statistics. On January 20, 1972, I was awakened to the fact that these books were being used in a serious manner to undermine American medicine. At the Kentucky-Ohio Valley Conference on the Health of Americans, the representative of the U.A.W. quoted the familiar phrases from the World Health Organization, and concluded that they were not getting their money's worth from medicine. The Bell Telephone representative also related the poor quality of American medicine. No one really answered these men. I tried to give some facts in sectional meeting, but this was more or less ignored. Also, I did not have the information I needed at that time.

When one investigates the basis of these statistics from the World Health Organization, it becomes clear that American medicine is the best in the world. The statistics which rank us as 18th in infant mortality, simply are not collected on the same basis that we use and no one has shown anything better than our latest figure of 19 deaths per 10,000 births. Our longevity is only about a year and a half below the best, including all of our different ethnic variations.

This is what I have tried to point out at the various district meetings and that American medicine can only go forward through organized medicine as KMA and AMA.

The activities participated in are listed below.

1971

Sept. 29-Oct. 2	KMA Executive Committee and Staff, Kentucky Dam Village
Oct. 5, 6	Michigan State Medical Association, Grand Rapids, Michigan
Oct. 8-11	Blue Shield Meeting, Washington
Oct. 13, 14	Indiana State Medical Association, Indianapolis, Indiana
Oct. 15, 16	Virginia State Medical Association, Arlington, Virginia
Oct. 20	Nurses' Association Meeting, Lexington
Oct. 27, 28	KMA Executive Committee
Nov. 10	KMA Scientific Program Committee Meeting
Nov. 11	KMA Board Meeting; Blue Shield Meeting; Appalachian Committee and O.E.O.; Legislative Committee Meeting
Nov. 18	KMA Interim Committee Meeting, Somerset
Nov. 20	Burl Mack Testimonial Dinner
Nov. 28	Meeting of State Presidents of Medical Societies, New Orleans; AMPAC Tenth Anniversary Dinner, New Orleans
Nov. 28-Dec. 2	AMA Interim Meeting, New Orleans
Dec. 9	KMA Board Meeting
Dec. 15	Frankfort, Meeting re Title XIX, State Department of Health
Dec. 16	Specialty Group Presidents Luncheon Meeting

1972

Jan. 5	Key Man Orientation Conference, Frankfort; Committee on Legislative Activities

**In order to make the Digest of Proceedings of the second meeting of the House of Delegates more understandable and because it will occupy less space in the Journal, the KMA Board of Trustees passed the following motion several years ago: "that if no dissenting action on the committee's recommendations is made either by the committee or the KMA Board of Trustees, only the reference committee action on the report be printed in the Journal."*

Jan. 13	Kentucky Foundation for Medical Care Board Meeting Meeting with Officers of Foundation and KMA to Discuss a Plan concerning Utilization Review and KMA's Long Range Program
Jan. 15	KMA-KBA Abortion Symposium, Lexington
Jan. 19	Interspecialty Council
Jan. 20	Kentucky-Ohio Valley Conference on Health Care, Lexington
Jan. 27	Committee on Legislative Activities, Frankfort
Feb. 4	Hospital Planning Meeting, Frankfort
Feb. 5	KMA, Generic Drug Meeting
Feb. 10	Committee on Legislative Activities, Frankfort; Meeting of KMA Delegates to AMA
Feb. 10	Blue Shield Dinner for Senior Medical Students — Panel
Feb. 16	KMA Executive Committee Meeting; meeting with nurses
Feb. 23	First District Trustee Meeting, Paducah
Feb. 24	Special Ad Hoc Committee on Health Care Costs; KMA Legislative Committee Activities; Blue Shield Planning Meeting; Foundation Meeting
March 2	KMA Budget Committee Meeting
March 9, 10	Illinois State Medical Association Meeting, Chicago
March 10-12	AMA-AMPAC Workshop, Washington
March 13	Medical Assistants Dinner
March 14	Tenth District Trustee Meeting, Lexington
March 22, 23	KMA Executive Committee Meeting
April 10	Kentucky Dental Association Luncheon
April 12-14	KMA Interim Meeting, Somerset; Executive Committee Meeting
April 15, 16	Eighth District Trustee Meeting, Carter Caves, Kentucky
April 18	Kentucky Hospital Association Luncheon
April 18	Second District Trustee Meeting, Owensboro
April 19	Hospital Association Dinner
April 20	KMA Claims and Utilization Committee Meeting
May 1	Blue Shield Breakfast
May 2	Thirteenth District Trustee Meeting, Ashland
May 9	Sixth District Trustee Meeting, Bowling Green
May 10, 11	Ohio State Medical Association Meeting, Cincinnati
May 11	Quick Action Committee Meeting
May 12	Practical Nurses Dinner
May 13, 14	Kentucky Academy of Family Physicians Meeting, Lake Barkley
May 15-17	KMA Congressional Dinner, Washington
May 18, 19	Fourteenth District Trustee Meeting, Pikeville
May 25	Bar Association Meeting
May 25-27	Kentucky Surgical Society Meeting, Lake Barkley
May 31	Seventh District Trustee Meeting, Frankfort
June 6	Third District Trustee Meeting, Princeton
June 7	Ad Hoc Committee Meeting
June 17	State Medical Society Presidents Meeting, San Francisco
June 18-22	AMA, San Francisco
July 6	KMA-Blue Shield Meeting
July 13	Fourth District Trustee Meeting, Bardstown
July 20	Blue Shield Meeting
Aug. 2	KMA Executive Committee Meeting
Aug. 3	KMA Board Meeting
Aug. 10	Fifteenth District Trustee Meeting, Cumberland Falls
Aug. 22-26	West Virginia State Medical Association Meeting, White Sulphur Springs, W. Va.

Attended 35 Out-Of-Town Meetings. Attended 11 district trustee meetings (accepted all invitation). Attended six other state medical society meetings.

Travel

For KMA:
By car—12,860 miles
By air— 6,832 miles
19,242 miles

Personal Medical Meetings
Philadelphia, ACCP—1,382 miles
Tampa, STSA —1,847 miles
San Francisco, STS—4,780 miles
8,020 miles

John S. Harter, M.D., President

Recommendations, Reference Committee No. 1

The Report of the President was reviewed at length. His alarm considering the political control of medicine was noted and concern is shared by the committee. The long list of activities he attended is just a brief outline of the tremendous amount of time and effort he has given to our Association. We wish to commend him for a job well done.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the President of the Woman's Auxiliary

Under the theme of "Let's Care" we have worked to show our concern for community health education and to promote mutual understanding among physicians' families. We have stressed the three areas which the AMA considered so vital this year—membership, legislation and political activity.

Revised procedures by our Membership Chairman, Mrs. Kenneth Peters, have worked effectively to bring our membership to 1,283, an increase of 147 over last year. We were recognized at the national convention of the Woman' Auxiliary to the AMA for having the largest percentage increase in membership of any State Auxiliary.

Activity in legislation and KEMPAC has been on several fronts. A Legislative Seminar was held in Frankfort during the General Assembly session. Two members of the KMA Committee for Legislative Affairs spoke about current national and state health legislation. The Woman's Auxiliary to the AMA Legislation Chairman, our own Rose Gardner, talked on how to effectively approach elected officials and how women can be effective in political campaigns. At the request of KMA, our county legislation chairmen have been checking registration rolls in their counties to ascertain the physicians and their families who are registered. The Medicredit slide presentation was given at a State Board Meeting.

This year, for the first time, the Auxiliary has had a State Chairman of KEMPAC. Mrs. William Pearson has carried the KEMPAC message of political education and campaign involvement to the county auxiliaries. In April, she conducted a two-day Political Education Seminar which stressed government organization, candidate support committees and campaign activities. This seminar was an exciting trip into practical politics. We hope it accomplished our purpose—to create a core of members across the State who can take the initiative in furthering medicine's legislative program.

County auxiliaries, working with Health Careers in Kentucky, had 12 "Health Careers Day" programs exposing a total of 2,991 students to over 200 careers in allied health. We have nine health careers clubs which our auxiliaries sponsor. Twenty-nine scholarships and loans totaling $20,424.54 have been awarded this year by our county and State auxiliaries to students in various health career training programs. We are continuing to build our film library with the purchase of four new film strips this year.

AMA-ERF giving was stressed this year, and our total contributions were increased to $8,069. A charm school, an auction, and 50th Anniversary charms were added to the other fund-raising items of Christmas cards, watches, note pads, umbrellas and "In Memoriam" cards.

The variety of community health education projects undertaken by the county auxiliaries increases each year. This year the Fayette County Auxiliary co-sponsored a publicity workshop with the University of Kentucky Communications Department to teach publicity methods to local civic and service clubs. A preschool vision screening project was begun by Henderson County Auxiliary and is a continuing project of Jefferson, Pike and McCracken auxiliaries. Jefferson County Auxiliary's charm school for teenage girls proved to be a boon for both the young girls and the AMA-ERF coffers. Courses in good babysitting techniques were offered by Boyd-Carter-Greenup and Franklin County auxiliaries. Drug education, venereal disease, blood donor and defensive driving programs have been supported in several counties.

An example of inter-organization cooperation took place this spring when doctors' wives in Detroit collected books and medical journals for the International Book Project of Lexington. This project was begun by a doctor's wife and is included in the International Health program of the national auxiliary. The books were flown to Lexington by the 99's, a national organization of women flyers who have agreed to help transport materials collected by auxiliary members for medical relief organizations. The planes were met in Lexington by auxiliary members, who transported the books to the International Book Project office.

Our State Spring Board Meeting, held in Shakertown, had an expanded format. Following the Board Meeting, the members spent the night in the charming Shaker buildings and then attended workshops for county chairmen the next morning. The workshops were on AMA-ERF, health careers, legislation-KEMPAC, membership, nutrition and safety. Mrs. John Chenault, of the AMPAC Board of Directors and Mrs. Amos Johnson, Vice-President of WA-AMA, were guest speakers.

This year, we saw tangible results of having a coordinator. Rose Gardner has compiled a file of current and potential auxiliary members and put it on address plates. This gives us a much improved method of mailing the Blue Grass News. She has worked closely with Mrs. Murray Kinsman to bring about the incorporation of the State Auxiliary and also our Heath Careers Loan Fund. In addition to helping with the mechanics of State Board and committee meetings, she has helped promote our program throughout the State in numerous ways. The State Auxiliary is grateful to KMA for making it possible for us to have a coordinator and for giving us an office in the KMA building.

I want to thank all of the members of the KMA staff for their help and consistent good humor throughout the year. I hope the efforts of the Auxiliary this year have been a help and a source of pride to our physician husbands because that, after all, is our primary goal.

Mrs. David B. Stevens, President
Woman's Auxiliary to the KMA

Recommendations, Reference Committee No. 1

The Report of the President, Woman's Auxiliary to KMA, was reviewed and again, this year, the committee was impressed by the energy and work of the Auxiliary. We wish to congratulate them and express our gratitude for their support.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the President-Elect

With the close of another Associational year of Kentucky Medical Association, the time of reflection

is upon us. As I reflect upon my year as President-Elect, I find it has been a very enjoyable year for me. Without the yoke of responsibility of a major decision position as the President or Chairman of the Board must carry, I have been able to reflect upon the course and direction our organization has taken in the past decade and to make plans for the next year. In my reflections I find I am, in general, pleased with the progress we have made. I feel this organization is one of the strongest state medical societies in the nation. I am proud to say I have been a part of the organization that has developed a most successful political arm in the sophistication of KEMPAC, a tried and fair peer review system with its strength in the grass root county and Trustee District Committees, and with the development of a Foundation which holds great hope of coping with creeping federalism.

This past year has been spent in educating myself in what I feel will be our most pressing problems in the immediate future, i.e., HMO, HSO, and NHI, malpractice insurance and all of their ramifications. I attended the American Medical Association Conference of Socio-Economics in the spring of this year. The American Medical Association meeting in New Orleans was most informational, as was the meeting in San Francisco.

At home, the experience of hearing national speakers at our Interim Meeting has been of great help in formulating policies for the future. Our experience in the State legislature has been very educational and has again pointed out that the future of medicine in this country is linked to the political process. Our part in the development of a "generic drug" bill which protects our patients and our mode of practice points up the necessity of this organization's involvement in the law-making process. I wish at this time to commend the Legislative Committee, our staff, and the Woman's Auxiliary for their part in a most successful legislative year.

In November, it was my pleasure and privilege to testify for our Association before the President's Commission on Malpractice in Cincinnati. Our report was well received and special interest was expressed in our peer review activities.

Our annual trip to Washington to meet with our legislators was, as usual, successful and rewarding. However, there may be some changes in the format next year to improve on this already successful program to make it even more educational and to entice more and broader-based participation by our membership.

One of the highlights of the year was my participation in a joint meeting of our Board of Trustees and the Board of Blue Shield. This was the brainchild of our Chairman of the Board, David Hull, M.D., and a most rewarding and informative day. I recommend that this practice be broadened and continued in the ensuing years.

In addition to the above meetings, I was most pleased to have been a part of the planning and completion of the new wing of our Headquarters building. This is indeed a fine piece of work, and I commend the Building Committee and staff for a job well done. If there is any doubt in any of your minds that this addition was necessary, I urge you strongly to take the time to stop by and inspect this addition and the use to which it is being put.

I have also attended the usual Executive Committee, Board of Trustees and Foundation Board meetings which are the working meetings of our organization; and I am most pleased to say it has been a real pleasure to serve with such a fine and dedicated group of physicians. It is people such as these that make the sacrifices necessary to being a part of organized medicine worthwhile. They also give me confidence to say that within our organization is the ability to cope with HMO, HSO, NHI, and the rest of the alphabet that government and other third-party encroachers will bring to us.

It is therefore with great anticipation and confidence that I look forward to this next Associational year.

Lee C. Hess, M.D., President-Elect

Recommendations, Reference Committee No. 1

The Report of the President-Elect was reviewed, and the committee wishes him a most successful term of office for the coming year.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Speaker of the House

The 1972 session of the House of Delegates will have its first meeting at 9:00 a.m., Monday, September 18, in Stouffer's Louisville Inn, which is the headquarters for the meeting. Reference committees will meet at 2:00 p.m., that afternoon, with the second meeting of the House set for 7:00 p.m., Wednesday evening. The format and procedure for conducting the House of Delegates meetings and reference committee meetings will be essentially unchanged over previous years. This year the Board of Trustees recommended that there be a Special Reference Committee on Resolution H during the Annual Meeting. Therefore, in accordance with their wishes and directions, we'll run this reference committee simultaneously with others as in previous years; and it will stay in session until 4:30 p.m. the same day as the other reference committees, allowing everyone an equal opportunity to present their viewpoint.

The House of Delegates attendance record in 1971 was just a fraction above that of 1970. In 1970 we had 32 officers and 106 delegates, for a total of 138. In 1971 we had 31 officers and 111 delegates, for a total of 142. This total, as tallied by our central office and after looking and checking the attendance records, is a slight improvement over previous years, We could do better, however, because our potential for delegates is somewhere in the neighborhood of 200, that is, throughout the entire State, so we still need to improve in this department. The cooperation of all delegates and members of reference committees is sincerely appreciated by the Speaker and Vice-Speaker. Much time is contributed and spent on

the part of our colleagues on these reference committees. We make every effort to see that the distribution of membership of these committees is equal geographically and that every district has some representation. Again, on behalf of the Speaker and Vice-Speaker, we appreciate your attendance to your duties and are looking forward to seeing you at the September meetings.

Richard F. Greathouse, M.D.,
Speaker, House of Delegates

Recommendations, Reference Committee No. 1

The committee reviewed the Report of the Speaker of the House. A special note of the attendance figures was discussed and the committee urges the House of Delegates individually to accept the responsibility in attending Annual and Interim Meetings. We wish to commend the Speaker and Vice-Speaker for their efforts in conducting the business of the House in the appropriate manner.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Chairman of Board of Trustees

When agreeing to serve as Chairman of your Board of Trustees one year ago, I felt I was quite knowledgeable about the Kentucky Medical Association, its affairs, its activities and the scope of our organization's responsibility and performance. During the past 12 months I learned that I did not know; but at least I now understand that I expect to learn something new every day. The activity is vast; the change is tremendous.

Many of us may not know it but we rely on the resources, actions and reactions of KMA every day—and have been since the time medicine became a part of our life. Since there is truly no way to fully inform you of the great involvement of your State Medical Association, may I plead with you to confer with your elected officers, discuss problems and ideas with them, ask them for periodic reports, and have faith in their decisions knowing they have been provided with many details prior to being asked to make a decision on matters of importance to you.

I have been privileged to have had outstanding, dedicated, hard-working—and I might add, thought-provoking—members on the Board this year. There is no way they can be paid for their many hours away from home and their out-of-pocket expense to serve the profession in Kentucky. From experience I know they receive a sense of satisfaction for fulfilling this responsibility. May I suggest an occasional "thank you" to your representative on the Board? I know he would appreciate it.

Barring any special meetings being called from the time of my writing this report and your reading it, the Board will have met eight times during the Associational year, the Executive Committee an additional seven times, and the Quick Action Committee has gathered to make emergency decisions on four occasions. How else can I say it but that there is much work being done. This report, by necessity, constitutes a very brief summary of the Board's activity.

As you know, the Bylaws mandate a constant change in membership in our Board. I think this is healthy and opens the door for new ideas and new goals to seek. Serving one's profession in such a capacity is rewarding to one in a sense of accepting this challenge for his profession. I urge you to give serious consideration of offering yourself to be an intrical part of this team or by urging someone you know with the appropriate leadership ability or potential to do so.

First Meeting, September 23, 1971

Acting as temporary Chairman, KMA Corporate Secretary, S. Randolph Scheen, M.D., recognized the new trustees who were as follows: Eugene Sloan, M.D., First District; Ralph Cash, M.D., Third District; and Carl Brueggemann, M.D., Eight District. He then introduced the new President-Elect, Lee Hess, M.D., and the Vice-President, Carroll Robie, M.D.

Newly elected AMA representatives were John Quertermous, M.D. and David Stevens, M.D. as AMA delegates and Donald Janney, M.D. and Fred Rainey, M.D. as alternate delegates. Doctor Scheen then recognized re-elected trustees Bruce Hamilton, M.D., Fourth District; Robert McLeod, M.D., Twelfth District; and Ballard Cassady, M.D., Fourteenth District. Continuing as Speaker and Vice-Speaker of the House of Delegates were Richard Greathouse, M.D. and Carl Cooper, M.D.

The Executive Committee was formed with the election of David Hull, M.D., Tenth District Trustee, as Chairman of the Board and Doctor McLeod as Vice-Chairman. John Llewellyn, M.D. and Paul Parks, M.D. were named to represent the Board of Trustees on the Executive Committee, which was completed with the officers who serve on the committee; i.e., the President, President-Elect, Vice-President and Secretary.

Next to be elected were the Trustees to serve on the Board of Trustees of the newly formed Kentucky Foundation for Medical Care. Those named were Wesley Johnson, M.D., Thirteenth District; Thomas Leonard, M.D., Seventh District; E. C. Seeley, M.D., Fifteenth District; Doctor Cassady, Fourteenth District and Doctor Sloan, First District. Physicians-at-large elected were Doctors Faull Trover, Neville Caudill, Frank Bechtel, Marvin Bowers and Henry Asman.

The Board then proceeded to their main item of business, that of appointing membership of all the committees to serve during the Associational year. The session closed with routine reports and announcements.

Second Meeting, December 9, 1971

The second regular session of the KMA Board of Trustees was held on December 9, 1971, at the Headquarters Office. The President's Report, Headquarters

Office Report and Report of the Delegates to the AMA were accepted for information.

Action on committee activities included:

Instructing the Educational Television Committee and Medical Education Committee to work together on a recommendation to the Board concerning specific continuing education programs;

Approving the conducting of a Seminar on Emergency Crises by the Medicine and Religion Committee;

Approving a project for the KMA Hospital Committee and the Kentucky Hospital Association offering the visit of a qualified team to assist hospital-based extended care facilities as to their proper use;

Authorizing a seminar for emergency department nurses to be held on April 28-29 and co-sponsored by the Trauma Committee, American College of Surgeons, and KMA's Disaster Medical Care Committee; and

Requesting the State's two medical schools to form an elective course in the treatment of athletes as urged by the School Health Committee.

With the Kentucky General Assembly scheduled to convene shortly, legislative proposals reviewed and action taken upon them were in the areas of medical licensure, health department boards, statute of limitations, peer review liability, healing arts accreditation, hospital governing boards, generic drugs, smallpox and a proposed bill acknowledging that blood is a service.

Henry B. Asman, M.D., Louisville, President of the Kentucky Foundation for Medical Care, Inc., presented a summary of the actions taken by the Foundation Board members at their November 4 organizational meeting. He pointed out that the Foundation has appointed a number of committees and, with KMA Board approval, some committees of KMA were transferred to the Foundation.

Carl Cooper, Jr., M.D., Bedford, and Harvey A. Page, M.D., Pikeville, were appointed to the KEMPAC Board; and nominees were approved for submission to the Governor for an appointment to the State Board of Health.

Other actions taken during the meeting were to:

Exhibit at the Kentucky State Fair;

Provide KMA members with auto decals;

Reaffirm policy limiting PRN refills to five or not to exceed a time limit of six months;

Request David A. Hull, M.D.; Lee C. Hess, M.D.; and Paul J. Parks, M.D., to serve as an ad hoc committee to study and make recommendations concerning the future of the Rural Kentucky Medical Scholarship Fund;

Authorize appointment of Douglas H. Jenkins, M.D.; W. Bruce Hamilton, M.D.; and Doctor Hess to work with representatives of the Kentucky Bar Association for the purpose of jointly sponsoring with KMA a seminar on abortion;

Receive a report on the KMA Orientation Program to include some suggested changes in the format;

Authorize appointment of a special committee to meet with third party carriers to discuss the best methods of implementing Resolution H (Third Party Payment Plans) for the purpose of making a recommendation at the next meeting of the Board; and

Appoint a committee of the KMA Delegates and Alternate Delegates to the AMA for studying means of promoting the value of and increasing membership in the American Medical Association.

The date of the next Board meeting was set for April 12 at the Somerset Holiday Inn.

Third Meeting, April 12, 1972

The third regular session of the KMA Board of Trustees was held on April 12, 1972 at the Holiday Inn in Somerset. At the beginning of the meeting, the President's Report and Headquarters Office Report were accepted for information.

Ballard Cassady, M.D., Chairman of the KMA Budget Committee, presented the proposed budget for the 1972-73 Associational year. The budget had previously been approved by the Budget Committee. The budget was accepted by the Board and the Committee was commended for its efforts and preparation of the budget.

A summary of bills introduced and action taken during the 1972 Kentucky General Assembly of interest to the medical profession was distributed to the members present.

Ad Hoc Committees of the Board reported as follows: 1) *Ad Hoc Committee on AMA Membership* presented light areas of endeavor by which they felt AMA membership could be improved. The recommendations were accepted. 2) *Ad Hoc Committee to Study Rural Kentucky Medical Scholarship Fund* reported it was felt that KMA members need to be made more aware of the purpose of the fund and it was recommended that a copy of the contracts used and a copy of the map showing the location of the recipients in the state be distributed either in the Communicator or in a separate mailing. Recommendations of the Committee were approved. 3) *Ad Hoc Committee to Study Resolution H* stated that full discussions of the Committee should be made available to the Board and other interested committees. It was also felt for various reasons that it would be impossible to implement the Resolution at this time. A minority report referring the Resolution back to the House of Delegates in 1972 for reconsideration was accepted by the Board of Trustees. It was also the feeling of the Board that a special Reference Committee be formed at the 1972 Annual Meeting to study Resolution H. 4) *Ad Hoc Committee on Electronic Data Processing*—The recommendation of this Committee including adoption of a state-wide computer billing program was approved.

Henry B. Asman, M.D., President of the Kentucky Foundation for Medical Care, Inc. reported to the Board concerning the meeting held by the Foundation on January 13. The report was accepted for information.

The Chairman informed the Board concerning several state councils and boards to which KMA submits nominees to the Governor for appointment. A list of these nominees was distributed to the Board and approved by them.

Several standing committees of KMA made reports

during the Board meeting. These are as follows: 1) *Building Committee* Chairman reported the building addition is completed and invited the members to tour the new addition. 2) *ETV Committee* made recommendations to the Board concerning a new concept in programming and the possibility of utilizing closed circuit television through the community. 3) *Legislative Committee* request concerning letters to the Kentucky Pharmaceutical Association and the Kentucky Nurses Association was considered by the Board and it was felt that letters would serve no useful purpose. 4) *Orientation Committee* made recommendations concerning a new program. The recommendation that all new members be excused from orientation this year was accepted by the Board. 5) *Title XIX Committee* presented a resolution which had been given to the Advisory Council for Medical Assistance on March 22, 1972. The Board agreed with the resolution as presented by the Title XIX Committee. 6) *Plans and Development Committee* presented recommendations concerning experimental health care delivery systems, participation of physicians in comprehensive health planning programs, continuing medical education and the possibility of committee meetings to be held in conjunction with the Interim Meeting. The Board accepted the recommendations and referred them to appropriate committees. 7) *Business Management and Services Committee* made recommendations regarding auto leasing, health prepayment plans and other tangible benefit programs for KMA members. These recommendations were approved. 8) *Public Relations Committee* reported that they had implemented two referrals to the Board. A suitable insignia designating KMA membership has been completed and the Committee is developing a State Fair exhibit which will be staffed by the Auxiliary members. Report of the Committee was accepted for information.

Several other matters were discussed by the Board of Trustees. They are as follows: The Board recommended that Walter I. Hume, Jr., M.D., and Henry B. Asman, M.D. be reappointed as Editor and Associate Editor of *The Journal* and A. Evan Overstreet, M.D. be appointed Assistant Editor.

The Chairman of the Board reported that the Washington Dinner will be held on May 15 and 16 and invited all members of the Board to attend.

A Judicial Council ruling, regarding physicians serving as members of the Board of Directors of local health projects, was presented to the Board by S. Randolph Scheen, M.D. It was felt by the Judicial Council that there was no breach of ethics in a physician serving on a Board and rendering service to patients referred by this Board.

The Chairman informed the members that a letter had been received from AMA regarding the need to keep members aware of changes in national health insurance activities. The letter was referred by the Board to the Legislative Committee.

It was reported that the 1972 Annual Meeting will be held at Stouffer's Inn and that future meetings will be held at one facility, either the Galt House or Ramada Inn; both facilities are drawing layouts for the Annual Meeting.

KMA has been requested to co-sponsor a JCAH workshop in conjunction with the Kentucky Hospital Association. It was noted that KMA accepted this responsibility.

The Board decided that the dates of the Interim Meeting should be changed and the entire format of the Interim Meeting should be studied by the Interim Meeting Program Committee. A resolution and recognition of service was presented to George F. Brockman, M.D., Greenville.

The date of the next meeting was set for August 3, 1972 at 9 a.m. at the KMA Headquarters building.

Fourth Meeting, July 6, 1972

On July 6, we held a joint meeting with the Board of Directors of Kentucky Physicians Mutual. Perhaps for the first time ever the two Boards met together to discuss health care problems today, methods of a better continuous communications procedure, and a desire to maintain liaison at the Board level.

The meeting was well received, and it is anticipated that it will be continued in the future for the benefit of all.

Fifth Meeting, August 3, 1972

As usual, the August meeting of the Board is primarily to review committee reports being submitted to the House of Delegates, but much more action is required. Numerous committee chairmen were in attendance to present their reports in person, and two trustees had been assigned to comment on each report and submit a recommendation to the Board.

Routine but thorough presentations were made by the President, Senior Delgate to the AMA, and the KMA Corporate Secretary. A Judicial Council nominee was selected for submission to the House of Delegates, and the dates of September 18-22 were approved for the 1977 Annual Session.

The Title XVIII Committee will be informed that the proposed pamphlet on Medicare may possibly be reproduced in the KMA Office. The Board accepted recommendations of the Coordinating Commission on Governmental Medical Services to add the Chairnan of the KMA Committee on Health Care of the Poor and a physician member of the Comprehensive Mental Health Centers to membership on the Coordinating Commission.

The Board approved a letter being sent to the University of Kentucky Medical Center certifying the application of residents of Robertson County, Kentucky, to the National Health Service Corps for a health team.

It was determined that KMA should file suit, if necessary, against one or more nurse anesthetists to clarify from a legal standpoint payment of a nurse anesthetist and whether or not they are violating the Medical Practice Act.

The Board agreed that legal counsel will be employed on a $10,000 per year retainer basis for all work done for KMA and the Foundation. The Scholarship Fund and KEMPAC will be billed separately according to time spent.

The Board voted to limit service on any KMA committee to 10 years. A resolution of appreciation

will be presented to those committee members who have completed 10 years of service at the Wednesday evening meeting of the House of Delegates each year.

The Legislative Committee was instructed to propose a resolution to the House of Delegates endorsing AMA's Medicredit proposal. The Board endorsed the "Action '72" Project and it will be referred back to the Legislative and Public Relations committees for implementation.

Changes in the KMA Blue Cross and Blue Shield Group Plan were accepted as follows: (1) Change the maximum daily room allowance from $30 to semi-private accommodations, and (2) Change the out-patient co-payment percentage for nervous and mental disorder benefits from a 50-50 basis to an 80-20 basis.

The Board voted $1500 to help finance a statewide Medicine and Religion Workshop.

The Board reaffirmed KMA policy that providers of health care should be included on the Board of Directors of any HMO in Kentucky.

The Board approved a resolution on Usual, Customary and Reasonable, similar to AMA's. It will be presented to the KMA House of Delegates in September. Also approved was the Kentucky Physicians Mutual's invitation to annually host a one-day meeting for the new presidents and officers of county medical societies and new Trustees of KMA to assist them in becoming more knowledgeable regarding Blue Shield programs.

A Resolution on Cost of Hospital Care was approved and will be presented to the House of Delegates.

It was determined that a letter should be written to the Honorable Wendell H. Ford, Governor of the Commonwealth, explaining the situation concerning the FLEX examinations and urging him to expedite the appointment of the Board of Medical Licensure so this matter may be resolved.

A resolution urging all hospital staffs to have on-call rosters was approved and will be presented to the House of Delegates by the Board of Trustees in September. All reports of the committees were approved and a notation was added to Report No. 30 from the Memorials Commission that the Board wishes to inform the House of Delegates that the portrait of Doctor Sutton has been received in the KMA Headquarters Office and is on display in the Board Room.

The Board of Trustees approved the recommendations of the KEMPAC Board for its new directors.

As is customary, the final three meetings of the Board for the Associational year will be held during the Annual Meeting.

The members of the Executive Committee worked diligently throughout the year both by attending meetings and on special assignments. The complete minutes of their meetings as well as the Board are being made available to members of Reference Committee Number 1.

The Board members join me in expressing our gratitude to the six Ad Hoc Committees of the Board, who conducted considerable business for us during the year. Since some of them are rather large, we will not list all of their names in this report but I think you can find them under the committee list in your House of Delegates handbook.

In the interest of efficiency, this year we had a Committee on Legal Services that met on four occasions to study the most practical use of legal counsel and how legal counsel could best serve KMA. The report was accepted at the August Board meeting and we are grateful for their efforts.

The Ad Hoc Committee on AMA Membership was appointed by the Board of Trustees primarily for the purpose of examining ways KMA could encourage its members to join the AMA. The Committee worked vigorously and arrived at eight specific recommendations which ranged from letters being sent to nonmembers of AMA to introducing a resolution in the AMA House of Delegates and to sponsoring an exhibit at our meeting this year. Stop by the exhibit hall and visit with your AMA delegation. You might also consider inviting one of them to speak to your county medical society.

Again I would like to express my appreciation to the Board and all other members who have been so helpful to me this year. It has been a pleasure serving as your Board Chairman.

David A. Hull, M.D., Chairman

Recommendations, Reference Committee No. 1

The Report of the Chairman, Board of Trustees, was reviewed with the exception of those sections regarding the matters relating to Resolution H, the Building Committee, the Ad Hoc Committee on Orientation, and the Ad Hoc Committee on Electronic Data Processing. The report shows the extensive work of the Board throughout the year. The committee took note concerning nurse anesthetists and legal implications under the Medical Practice Act. No ready solution is apparent. It was further noted that the Report of the Judicial Council, Point No. 8, covers this problem and was discussed by Reference Committee No. 6.

We wish to thank the individual members of the Board for their time and efforts on the part of our Society.

Mr. Speaker, I move the adoption of this section of the report.

(Motion seconded and carried.)

Report of the Secretary

We again come to the end of another organization year for KMA. It is time to review what we have done during the past year and look forward with anticipation to the new things and new challenges which we will face in 1973.

The activity of the KMA continues to increase. Within the past year, due to the extension of activities in all areas, there has been necessary expansion both in our building and in our KMA staff. We have been fortunate in that the building program has gone very well, and we have been able to acquire

some new very diligent and bright young men for expansion of our staff.

The new building is really quite something to see. There are new offices which were desperately needed for our executive staff and all new meeting rooms which have already been utilized on a number of occasions for various committee meetings and particularly for a rather large Blue Cross-Blue Shield meeting in connection with the Board of Trustees, which was an informational type meeting and held in our new large meeting room on the second floor. I would urge all of you to come out to the KMA Headquarters Office and go through the building; I think you will be very impressed at the construction as well as its layout. We have been able, with architects help, to put a small courtyard in the center of the building which just adds another very distinctive flavor to the building and makes it even more functional.

The formation of the Foundation for Medical Care and also the formation of various new committees and the extension of activities of some of the old committees have necessitated, as I stated above, the addition of new staff members. Our staff has increased over the past five years almost each year adding new members and we, as I stated above, have been very fortunate in getting new men who have been very helpful to us.

I would like to mention in this report that this year Mr. Robert Cox, who has been so faithful and done such an expert job of guiding us, has been with us for ten years. At a meeting following the Board of Trustees several weeks ago, a reception was held in his honor and a resolution was passed by the Board of Trustees commending Mr. Cox for his work in the past ten years. This was a well-deserved honor, and I felt that you should know about it.

It is always interesting to look over the statistics from the past years and review the meetings within the past organizational year. Since September of 1971 through July 15, 1972, there have been seven Board of Trustees meetings which were in session for 22 hours involving 179 physicians and 31,570 miles traveled. The Executive Committee met four times during this same period involving 110 doctor hours, 27 physicians, and 3,175 miles traveled. The out-of-state meetings included 12 which involved 43 days, 13 representatives, and 25,800 miles. The committee meetings totaled 71 involving 1,157 doctor hours and 58,106 miles traveled. The total mileage of the Executive Committee, Board and Committee meetings included was 92,853 miles. I think this will give you a good indication of how the physicians who represent you in these committees are working and how diligent and faithful they are to their appointed task.

As always, I would like to very heartily commend our KMA staff who have done such an excellent job in organizing and staffing the various committee meetings as well as the Board of Trustees and Executive Committee meetings. These meetings are all organized and attended by our staff and the directions carried out through them. They have done a magnificent job as they always have in the past, and I would like to ask you to join me in giving them a vote of thanks and commendation for their past good work.

I look forward to another year as Secretary and feel that we will continue to grow and continue to accomplish those purposes for which the organization has come together; that is, the betterment of health care for the people of the Commonwealth of Kentucky.

S. Randolph Scheen, M.D., Secretary

Recommendations, Reference Committee No. 1

The Report of the Secretary was reviewed with special interest concerning the increased workload, the additional number of meetings, and the tremendous number of doctors' hours required in carrying on the functions of the KMA.

Mr. Speaker, I move the adoption of this section of the report.

(Motion seconded and carried.)

Report of the Editor

Once again the Editorial staff can report a successful year's activity; *The Journal* has been published on schedule and with its function as a medical communicator more or less intact, we believe.

We report with a great deal of regret the resignation of Doctor Sam Overstreet, who has been a member of this Editorial Board in one capacity or another for 17 years, as assistant editor, with his replacement, A. Evan Overstreet, bearing a familiar name, to continue in the family line.

Mr. Cox and Mrs. Diane Maxey have continued the management of the technical details of *The Journal* with finesse and aplomb, and we are pleased that the Medical Progress articles, the Point of View column and the Letter to the Editors have been utilized nicely during the year. The new advertising rate schedule has been adopted, and has enabled us to maintain our financial position without, at least, further deficit spending beyond the pattern of the last several years.

Walter I. Hume, Jr., M.D., Editor

Recommendations, Reference Committee No. 1

The Report of the Editor was reviewed. The Editor and his staff are to be complimented for the fine *Journal* that they have produced.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Treasurer

You will find enclosed in your House of Delegates envelope a Statement of Financial Condition of the Kentucky Medical Association as of June 30, 1972, a Statement of the Changes in the Fund

Balances, and Condensed Statements of Income and Expense of the Current Fund, Reserve Fund, McDowell House and the Postgraduate Medical Education Fund for the year ending June 30, 1972.

The complete report of audit for the fiscal year ending June 30, 1972, is available to all members of the Kentucky Medical Association at the KMA Headquarters Office, 3532 Ephraim McDowell Drive, Louisville, Kentucky.

I think you will find the growth in our budget and our assets to be obvious.

Keith P. Smith, M.D., Treasurer

Recommendations, Reference Committee No. 1

The Report of the Treasurer was reviewed with the help of a representative of the KMA's auditing firm. The financial affairs for the fiscal year ending June 30, 1972, were reviewed in depth. It was noted that the financial condition of the Association is on a sound basis and working within the projected five-year goal.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Delegates to AMA

The clinical meeting of the AMA in New Orleans brought forth, from the President, Doctor Wesley Hall, the question of AMA's organizational structure and programs, and the declining AMA membership. Doctor Hall recommended a critical appraisal of these problems and despite the appropriate council opinions, the House of Delegates voted to hold open forums regarding the above questions beginning in San Francisco in June.

The KMA Board of Trustees has decided to investigate the problem of AMA membership and, independently to the AMA, has instituted a survey which will be carried out this year regarding AMA. The KMA Board of Trustees appointed a committee to study the problem and make recommendations regarding AMA membership declining. This committee composed of AMA Delegates and Alternates has held two meetings and at the KMA Interim Meeting made the following recommendations:

1. A letter would be sent to all physicians in the State who are KMA members but do not belong to AMA. This letter would be in the form of a personal invitation to the physician to join the national organization. The letter would be individually typed and signed by both the AMA Delegates and Alternate Delegates. It was noted that AMA has agreed to type this letter on their special MTST typewriter.

2. In an effort to follow up these letters, the State was divided into three regions. Doctors Quertermous and Rainey—Region I; Doctors Giannini and Bryant —Region II and Doctors Stevens and Janney—Region III. Each Delegate was given the responsibility of contacting physicians in his region who are non-members of AMA. This is to be accomplished by (a) either they themselves personally contacting these physicians or (b) through a representative who is acquainted with the individual.

3. In an effort to promote national membership, it was recommended that at the KMA Annual Meeting, the KMA delegation to the AMA man an AMA booth in the Exhibit Hall. The purpose of having Delegates and Alternate Delegates staffing the booth is so that they can personally come in contact with prospective members and answer any questions they have regarding AMA.

4. It was recommended that the Delegates make every effort to promote meetings in some of the larger hospitals between themselves and interns and residents. The purpose of the meeting would give the interns and residents the opportunity to ask questions they may have regarding AMA.

5. A recommendation was made that the AMA delegation appear at some of the larger county medical society meetings. It was suggested that they show the AMA slide presentation and answer questions the members may have. It was also recommended that in order to make the county medical society secretaries aware of this service, it would be printed in the KMA Communicator.

6. As another means of encouraging AMA membership, it was recommended that an article be printed periodically in the KMA *Journal* regarding some aspect of AMA. It was decided that these articles would be written by the individual members of the delegation.

7. The committee also felt that an AMA sponsored liability insurance program would also be a means of stimulating national membership. The delegation went on record as encouraging AMA to actively promote their liability insurance program.

8. It was the feeling of the Delegates and Alternate Delegates that a centralized billing program would also help to encourage national membership. Since a special Ad Hoc Committee on Electronic Data Processing was making a study of the possibility of state-wide billing, our committee did not make any recommendations at that time.

The Board of Trustees of AMA has also begun a program on a Critical Survey of the AMA. The first item of this survey was in the form of a questionnaire. This will be followed by informational, educational and planning programs. The decision to do this is based on the increasing philosophy that a unified but not necessarily a unanimous opinion of the physicians in the United States must be followed. To assure that this opinion will be obtained, medical students, interns, residents and non AMA members have been invited to express their opinions on all pressing problems.

In all, this has been a year of instituting a wide variety of changes of philosophy in the health care field, medicine, hospitalization, insurance, community participation and governmental involvement.

To serve the people of the United States, medicine must continue in a dominant position in medical care. We must act as advisors to government in health care, provide counsel to officials of hospitals, medicine and insurance programs and continue our role

of providing quality medical care for all the people of the United States.

The AMA Annual Meeting in San Francisco in June brought forth some of the recommendations by President Hall at the previous New Orleans meeting in November. Among the questions which were answered was a survey of doctors throughout the country regarding the type of practice which the majority of them felt should be emphasized by the AMA. Seventy-three per cent of the doctors in the country felt that private practice was still the choice of those practicing medicine in the United States.

In regard to an open forum concerning problems confronting the AMA membership, this was held on the day prior to the meeting in San Francisco and numerous speakers presented opinions, programs and recommendations regarding changes which they felt were indicated in the AMA. These were presented to the Council on Long Range Planning and Development and will be reported at a later date.

The AMA meeting in San Francisco was one concerning changes which apparently will become inevitable in AMA structure. The meeting was highlighted by the inaugural address of Carl A. Hoffman, M.D. who recommended to the House of Delegates that every effort be made to unify the physicians in this country as we will be sorely set upon in the next few years by politicians and legislators to develop a plan of national health insurance and/or national socialization of medicine. Doctor Hoffman pointed out to the House a threat of unionization of medicine in this country and categorically described it as a violation of medical ethics. In an attempt to bring the AMA House of Delegates' thoughts up to the present with the introduction of the young element into the practice of medicine, the House voted to have a representative of the student AMA as a member of the House of Delegates. With the introduction and presence of interns and residents in the House of Delegates this was felt to be an appropriate manner in which a new element of medicine could best be heard through the country.

The House of Delegates meeting associated with the AMA Annual Meeting in San Francisco could best be described as a meeting in which assessment of past and present programs was discussed, new and alternate methods were investigated and presented to the Council on Long Range Planning and Development for their assessment and recommendations in order that the AMA may continue to be the focal area to which all medicine may direct innovative ideas in order that the medicine of this country may be furthered to the best desires of the patient and the country.

I wish to recognize the other members of our delegation, the Delegates, the Alternate Delegates, the officers and members of KMA and staff for their help in providing this report.

J. Thomas Giannini, M.D., Senior Delegate

Recommendations, Reference Committee No. 1

The Report of the Delegates to AMA was reviewed. We wish to compliment them on their representation of our State to the AMA and their efforts to promote the national membership.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Executive Director

The phrase "time slips by" is outmoded in my opinion because time appears to "streak by" in today's modern world as do the needs, activities and accomplishments of people and organizations. The Kentucky Medical Association has proven to be no exception.

The report of the Executive Director this year will deviate from the routine and hopefully provide you with a brief summary of progress at KMA. In May of 1962, KMA dedicated its first Headquarters building with considerable pride. We had moved from crowded quarters in the Medical Arts Building on Eastern Parkway in Louisville, and many wondered how we would ever utilize the 7,000 square feet of space in the new building.

This year, a decade later, we have completed an addition to our Headquarters which is, in fact, larger than the original building. The addition contains some 10,000 square feet of floor space. Immediately upon its completion in June, the main floor and portions of the basement became fully utilized. The second floor is currently in use as an assembly hall, and it will convert into offices as the need arises in the future. I suppose one of my reasons for wishing to reminisce about this decade is because I became a staff member at KMA exactly 10 years ago and have had the opportunity and privilege of seeing the Headquarters building constructed, the rapid growth of Association activities and the addition completed which will house the staff, committee and Board members who are striving to guide and direct this explosion of organizational challenges.

Government, at all levels, has probably been the largest factor with which organized medicine has had to cope during this decade. Probably 80% of our daily activities were not a part of the 1962 routine. Who then had heard of Medicare, Medicaid, Regional Medical Programs, Comprehensive Health Planning, Appalachian and Office of Economic Opportunity Programs, Neighborhood Health Centers, Health Maintenance Organizations, perhaps even Peer Review, and on and on *ad infinitum.*

I can say that the Kentucky Medical Association by itself is almost a million dollar organization, as this is the approximate figure of KMA's budget and assets. In 1962, our budget for the fiscal year was $180,000. Today, just 10 short years later, the budget and total assets of the Kentucky Medical Association standing with its allied organizations totals nearly $2,000,000. This includes the Rural Kentucky Medical Scholarship Fund, KEMPAC, McDowell House, the Foundation, and the many other activities which have been borne from the hard work of those involved with the Kentucky Medical Association. We are, for all practical purposes, a two million dollar operation.

I would like to quote a line from the Report of

the Executive Secretary in 1962, which should have impressed anyone who read it then with the Association's many activities. The report said in part, "There was a decided increase in the work undertaken by the various committees, councils and the Board of Trustees." The report went on to state that 72 meetings were held during the year.

Today, even though we maintain a continuous effort to keep committees at a minimum, we now arrange 20 or more meetings in the Headquarters Office each month, or approximately three times that of 1962. Our outside meetings with allied groups and others have quadrupled at least—again with governmental agencies being responsible for a major part of this increase. An occasional out-of-state meeting held during the years of the early 1960's has grown now to the point that staff is probably representing the Association at some regional or national meeting three or four times each month.

Obviously, increased need for meeting the challenges of this decade has made it imperative that we have additional staff assistance. During 1962, the staff consisted of three executives, three department employees (Accounting, Journal and Membership), and three secretaries for a total of nine people. Today in the Headquarters Office we have six executives, the same three department employees, seven full-time secretaries, two part-time secretaries, an Auxiliary coordinator, and this does not include the part-time services of our legal counsel and public relations consultant. In addition to this, the part-time employees at McDowell House in Danville have been joined by one full-time employee; and the House has grown in prestige since having been made a national historic shrine by the United States Government.

A flashback over the past decade might include any number of historical highlights. As we rove through the past, perhaps some of the following events will remind you of others. To help you recall some personal involvement, the name of the KMA President for each year is noted.

* * * * *

1961-62: Gaithel L. Simpson, M.D., Greenville

The first KMA Headquarters Office is erected and dedicated. The 7,000 square foot building houses nine employees. KEMPAC is organized and establishes itself as an early leader in state PACs. Doctor George Archer is appointed as its first chairman. Health-O-Rama is introduced to State Fair patrons as a health fair at the State Fair.

1962-63: David M. Cox, M.D., Louisville

Much groundwork preceded the formation of the KMA Insurance Review Board, the predecessor of Peer Review as we know it today. Gaining steam in our new Headquarters, we see a blossoming of committee and council activities. A mandatory Orientation Program is adopted by the House of Delegates. We are beginning to take a closer look at the idea of letting the public know of our many programs designed solely for their benefit.

1963-64: George P. Archer, M.D., Prestonsburg

Special District Meetings are held on KMA's and KEMPAC's involvement in scientific, socio-economic and political activities. The KMA Judicial Council is formed, and discussions in areawide hospital planning mark the beginning stages of the coming of Comprehensive Health Planning. We sponsor our First Conference on Mental Health. Emergency medical care and highway safety are noticeably increasing in interest and effectiveness.

1964-65: Delmas M. Clardy, M.D., Hopkinsville

Special efforts are being made this year in promoting voluntary health prepayment systems, and greater involvement in political action is surfacing. Congress passes PL 89-97 (Medicare-Medicaid Law). Formation of voluntary Areawide Hospital Planning Commission is urged and special projects are featured, such as Diabetes Week, Senior Day Programs, Rural Health Conference, Immunization Week and Health Education. "Dry Run" hospital accreditation visits by KMA members begin a popular surge.

1965-66: Everett H. Baker, M.D., Louisville (Deceased)

The U. S. Department of the Interior commissions the McDowell House as a national shrine. Medicare and Medicaid go into effect in Kentucky, and discussions of "Usual, Customary and Reasonable" are begun with the Department of Health relative to the Medicaid Program. KMA's committee and council structure is reorganized (our Hoover Commission) and an active Kentucky General Assembly prompts the Legislative Committee to request two lobbyists in future sessions.

1966-67: Robert E. Pennington, M.D., London

Legislative activities at State and national levels continue to increase and delve deeper into medical affairs. More concern is expressed about cultism. A special KMA Committee to Study Fragmentation of Health Services in Kentucky is appointed. Problems increase with Medicaid Program and UCR discussions continue. Phrases like Appalachian and OEO Programs begin to creep up. KMA's Driver Limitation program highlighted and becomes a national model.

1967-68: George F. Brockman, III, M.D., Greenville

An increasingly active Legislature raises its head again. Comprehensive Health Planning is established at the State level, and KMA outlines plans for regional boards. There is much discussion on effectiveness of Regional Medical Programs and increasing government involvement in medicine. The Second KMA Conference on Medical Education is successfully conducted. Health Careers in Kentucky continues to be strengthened with KMA's financial and physician involvement. The sudden death of KMA Executive Secretary Joe Sanford saddens those in the health field throughout the State, and the Headquarters building is named in his memory.

1968-69: Henry B. Asman, M.D., Louisville

Trustee District Meetings are emphasized and vitalized as all 15 Districts hold excellent sessions. Communicating with the membership becomes a cen-

tral theme carried out through the year. More meetings with Medicaid officials occur as problems intensify and are publicized, deeper involvement comes with Comprehensive Health Planning, guidelines for implementing UCR programs are approved, and there is a flurry of activity regarding State TB hospitals. The street on which our Headquarters is located is changed by name to Ephraim McDowell Drive. The House of Delegates expresses deep sympathy at the sudden passing of its 1965-66 President, Doctor Everett Baker of Louisville.

1969-70: Walter L. Cawood, M.D., Ashland

Kentucky is widely recognized as a leader in Peer Review, and KMA representatives appear on numerous out-of-state programs. We surpass the one million dollar mark in loans through the Rural Kentucky Medical Scholarship Fund and begin the formation of multi-county medical societies. Accelerated Association activity is backed up with a dues increase and more concern and interest is directed toward continuing medical education. The Plans and Development Committee lays out long-range goals to seal the unification of medicine, help specialty societies and establish new committees. More emphasis is now being placed on the Washington Dinner and Interim Meeting, both being annual affairs of the Association.

1970-71: John C. Quertermous, M.D., Murray

Special efforts of the year are directed toward health manpower, drugs, re-education, medical foundation functions and governmental medical programs. The call to take up the political gamut receives continued emphasis. There is exerted a determined drive striving to seek more cohesion between KMA, the component societies and the specialty group organizations. Alternate Trustees are elected to membership in the House of Delegates. Overall activities grow and staff is enlarged. The Kentucky Foundation for Medical Care is approved. A new concept of tangible benefits for KMA members is launched with a variety of goals outlined.

1971-72: John S. Harter, M.D., Louisville

The year is highlighted with the completion of the addition to the Headquarters Office building. The 10,000 square foot addition brings the entire building to a 17,000 square foot plant housing 22 employees. The Legislature is active again with perhaps the removal of Medical Licensure from the State Board of Health and from Frankfort to Louisville being the most significant Medical legislation approved. This year we see a rapid growth in the number of commissions, committees and councils appointed by the Governor on which are required physician membership. Travel and meetings—in-and out-of-state—are constantly more frequent but indeed essential.

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Not as of this writing but prior to your reading this report, our staff will have grown with the addition of three more full-time employees as indicated above; the Director of the Department of Medical Licensure, and two secretaries for the Department. Their relocation date to KMA is September 1, 1972. We welcome this addition to the KMA family.

I want to include as part of this report a brief summary of the responsibility of the male staff members, because I hope it will help inform you concerning the many programs in effect for you. The staff is ever cognizant that "you don't belong to KMA" but that "KMA belongs to you." Working with the officers, committees and individual members, we find that goals and priorities must constantly be changed and redirected as the situation demands. A brief synopsis of staff assignments follows:

Executive Director

The principle duty of the Executive Director is to execute and carry out all policies established by the House of Delegates and the Board of Trustees of the Kentucky Medical Association. In addition, he staffs the Executive Committee, Quick Action Committee, Budget Committee, special assignments such as the Building Committee, works with the Judicial Council, and a number of other committees and councils of the Association. He is the principle administrative officer and business manager of KMA. It is his responsibility to see that all administrative duties necessary and proper to the general management of the Headquarters Office be performed in a manner befitting an association of the size, scope and responsibility of KMA.

In addition, he is the Secretary of the Kentucky Foundation for Medical Care, Secretary of the Rural Kentucky Medical Scholarship Fund, Managing Editor of *The Journal* of the Kentucky Medical Association, and is responsible for final review of all publications emanating from KMA that may be authorized by the House of Delegates. Being the chief administrative officer of the Association, he is also called upon to serve on Boards of Directors and in various capacities with other organizations and to appear on numerous programs, both locally and nationally.

Assistant Executive Director

The primary duty of the Assistant Executive Director is to work in close coordination with the Chief Administrative Officer on all internal and external activities of the Association. He has prime responsibility in implementing plans for the Annual and Interim Meeting programs. This particular office entails tremendous correspondence and other means of communication in bringing together all of the many details that are involved in such assignments as making arrangements for the KMA Annual Meeting.

This individual also staffs numerous committees and councils of the Association to include the Advisory Committee to Blue Shield, Committee on Interim Meeting, Scientific Program, Health Manpower and Placement Service, Community and Rural Health, Constitution and Bylaws, Plans and Development, Disaster Medical Care, Scientific Exhibits, Educational Television, the Inter-Specialty Council, and his share of special ad hoc committees which from time to time are assigned to all staff members.

He, too, (as are other staff members) is called upon to attend meetings outside the state that are of interest to the medical profession. In addition, he has

responsibility for the "Communicator"; and in the absence of the Executive Director, he is in charge of all administrative work at the Headquarters Office and is responsible for the interviewing, hiring and supervising of all office personnel.

Executive Assistant

The Executive Assistant has as his main duty close coordination of activities with the Assistant Executive Director. He serves as coordinator to the Membership Department and is responsible for the staffing of 14 committees of the Association. He has a direct responsibility to be sure that all preparations are made for these meetings and for implementing any actions taken by these committees.

These committee activities include Orientation, Hospital, Allied Health, School Health, Medicine and Religion, Memorials Commission, Blue Cross, Maternal Mortality Study, Electronic Data Processing, Woman's Auxiliary, Awards, Health Insurance Standards and the new Business Management and Services Committee.

He has supervisory responsibility for maintenance of the Headquarters Office and grounds, is in charge of purchasing for the Association, and is our specialist on equipment maintenance and replacement. Any internal problem is apt to fall his way.

Director of Field Services

This position requires a considerable amount of personal contact with the KMA membership, legislators and other influential citizens in their home areas. During the legislative session, the Director of Field Services spends full time in Frankfort as a registered lobbyist, with the Senate as his primary assignment. He is responsible for implementing all the activities of the KMA Legislative Committee, serves as Executive Secretary of the Rural Kentucky Medical Scholarship Fund and as a consultant to KEMPAC.

In addition to these duties, he staffs committees in the area of governmental medical programs such as the Coordinating Commission on Governmental Medical Services, Advisory Committee on Title XVIII (Medicare), Advisory Committee on Title XIX (Medicaid), Selective Service and Health Care of the Poor.

Field trips (visiting with the members in their home setting) are planned well in advance and with considerable detail in order to communicate with all staff members of any need to visit special persons for specific reasons while in a particular area. Reports on each trip are submitted to appropriate officials and filed for the record.

Director of Communications

Communications include promotion of the public relations of the Association, responsibility for assisting officers, trustees and others in preparation of material to be used in meeting with or speaking to groups outside KMA, and all news releases originating from the Headquarters Office. The Director of Communications is also a full-time lobbyist during regular and special legislative sessions and is normally assigned to the House of Representatives. He and the Director of Field Services are the staff's external effort with both sharing in travel assignments as previously outlined. One of his inter-organization PR responsibilities calls for routine publication of the KMA "Blue Sheet", and he serves as Associate Managing Editor of the KMA *Journal*. The Director of Communications is responsible for advance promotion as well as all other aspects of the Technical Exhibit Hall at the Annual Meeting and for assisting the Executive Director in planning for various meetings, particularly those of the Trustee District level.

Most of his internal committee activity execution relates to possible legislative matters. These include the Cults Committee, Occupational Health, Physical Medicine and Rehabilitation, Environmental Quality, Public Relations, McDowell House and Appalachian and OEO Programs.

Coordinator of Claims and Utilization Review

Our newest executive has a primary duty to carry out the policies established by the Board of Directors of the Kentucky Foundation for Medical Care, Inc. This office is at present primarily concerned with all peer and utilization review functions. Some of the duties involved are organization, research and collection of material used by members of the Claims and Utilization Review Committee, administrative processing of claims submitted for review and coordination of meetings between committee members, third party carriers and individual physicians. This position also requires the processing of claims on a referral basis between the State utilization review groups and county medical societies and Trustee District peer review committees.

A monthly peer review newsletter is written and communication is maintained with numerous other organizations including Comprehensive Health Planning and the U. S. Department of HEW. Other committees of concern are Liability Insurance, Health Care Delivery, Finance, and Continuing Medical Education.

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It is impossible to review in this type report all the many activities of other members of the KMA staff. I wish space permitted. However, I felt it would be worthwhile to give a sketch of the daily activities and responsibilities of the KMA executive staff; and I am hopeful that you will glean from reading this brief review a feeling for the tremendous increase in activity which seems to be flourishing in the KMA for you, the members of KMA.

I could give a statistical report with towering numerical figures on the number of phone calls we answer daily or the pieces of mail received in the office vs the number sent from the office, the reports of the general public to which we respond, the daily visitors (professional and public) with whom we converse, the amount of time involved with all our publications over and above *The Journal*, the detail keeping of membership records or the writing of nearly 2,000 checks a year and all the bookkeeping related thereto. Keeping track of over 300 scholarship recipients, who have received well over one million

dollars, staffing exhibits for 10 straight days (such as at the State Fair), critiqueing past activities and planning for the future are all time consuming.

I believe, however, that such statistics would only muddy the water. I know that you can look at the reports in your House of Delegates envelope and, reading those reports (as well as between the lines), you will visualize an active, industrious and progressive KMA which has a direct ratio effect on the initiative, energies and involvement of staff. While the end results of staff efforts are many times hidden, they are still ever present.

As I mentioned at the beginning of my report, this particular one has deviated from the usual in the fact that I have attempted to review some of the many changes which have taken place at KMA during the past decade.

Like it or not, planned or not, we have made the transition from a sapling to a mighty oak. Our growth—in size, in numbers, in responsibility—has moved us as a professional organization away from the small business category. Everyday, the lives of all Kentuckians are affected in some manner by a KMA policy or program.

I think it is appropriate for me to briefly mention some of the highlights of the 1971-72 Associational year at KMA. The beginning of this Associational year saw us with one of the oustanding Annual Meetings in the history of the organization. The attendance at the Annual Meeting was near record proportion, and we are obviously pleased at the great interest which is shown by the membership in what has come to be considered one of the finest scientific programs at the state level in the entire country.

As all of you know, 1972 was a legislative year in Kentucky. Once more, we had two men on a full-time basis representing you in Frankfort. Naturally, there are times when we would like to see things accomplished in the Legislature that do not get done, but it is the general feeling of those who are closely involved with our legislative program, that we met with considerable success.

About the time you are reading this report, one of the changes brought about by the 1972 General Assembly will have taken place in the KMA Headquarters building. I mentioned it earlier, and that is that the Division of Medical Licensure moved into the KMA Headquarters effective September 1, 1972 with three additional staff members. It is felt to be quite beneficial for your Medical Association to have this direct input into medical licensure by virtue of this transition. It is undoubtedly a far-reaching change which should have an ongoing beneficial effect.

In 1971, in the final report of the Executive Director, I made the following statement: "As the number of our staff grows, so too does their enthusiasm and dedication to duty." I feel even more strongly at the end of this 1971-72 Associational year that this is the case. We have a deep realization among the staff members at KMA of the necessity of being flexible, willing to work extra hours when necessary and generally a feeling that it is important for us to work in close harmony if we are to carry out the programs set forth by the members of KMA. Staff loyalty is unsurpassed. The increased tenure of individual employment is indicative of their satisfaction with their occupation.

I have seen the completion of a new building and a constant increasing of KMA activities and programs. I see nothing ahead for the next decade but continued growth and development of meaningful health care programs that will have tremendous impact on the membership of KMA, but more importantly, on your patients, the people of the Commonwealth of Kentucky.

It has been a deep personal privilege and pleasure for me to serve the officers and membership of this Association during the past decade. Our goal is to continue to strive for maximum effectiveness in your behalf at all times. Our special appreciation is extended to the President, President-Elect, Board Chairman, Secretary, Treasurer and *Journal* Editor whom we seem to contact almost daily. Many others eagerly give willingly of their time.

We are very deeply indebted, at the staff level, to all of the members of KMA with whom we have had an opportunity to work so closely throughout the year.

Robert G. Cox, Executive Director

Recommendations, Reference Committee No. 1

The Report of the Executive Director was reviewed in detail. We wish to compliment the Director for his hard work and the staff for the many and varied duties they have performed so well. The review of the past ten years included in the report is especially noteworthy.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Advisory Committee to the Woman's Auxiliary

The KMA Advisory Committee to the Woman's Auxiliary has not found it necessary to meet this Associational year. However, we remain available for consultation.

We are of the opinion that the Committee can be a very helpful one, and should be continued.

Walter L. Cawood, M.D., Chairman

Recommendations, Reference Committee No. 1

The Report of the Advisory Committee to the Woman's Auxiliary was reviewed.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Resolution G

Editors of KMA Journal

WHEREAS, Sam A. Overstreet, M.D. has served the Kentucky Medical Association, the *Journal* of

KMA and his profession with high distinction for nearly four decades, and

WHEREAS, included in those years of service are terms as President of both his county medical society and the Kentucky Medical Association, and

WHEREAS, such dedicated service has helped immeasurably to preserve the private practice of medicine throughout this Commonwealth, and

WHEREAS, the House of Delegates of the Kentucky Medical Association wishes to honor this fine physician for his years of meaningful and lasting service, now therefore

BE IT RESOLVED, that the House of Delegates of the Kentucky Medical Association, meeting in Louisville, Kentucky on September 20, 1972, does by way of this resolution express to Doctor Overstreet its deep affection, professional admiration and lasting respect for the outstanding contributions he has made to Kentucky Medicine, and

BE IT FURTHER RESOLVED, that a copy of this resolution shall become a permanent part of the proceedings of the aforementioned meeting so that all who may look upon these records in the years ahead will know of our earnest and sincere desire to honor Doctor Sam A. Overstreet for loyal, faithful and dedicated service to his chosen profession, the public and this Commonwealth.

Recommendations, Reference Committee No. 1

Resolution G, Sam A. Overstreet, M.D., introduced by the editors of the KMA *Journal,* was reviewed in detail.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

At this time, Doctor Overstreet was called to the podium and was presented with a plaque, upon which was inscribed the above resolution.

Resolution K

W. Neville Caudill, M.D.

WHEREAS, the Williams and Wilkins Company is a publisher of medical journals and textbooks, and

WHEREAS, this company has instigated litigation the effect of which would be to prevent the reproduction of journal articles for the private reference use of physicians, and

WHEREAS, such action would impede the availability of vital information to physicians, therefore be it

RESOLVED, that the KMA express its strong disapproval to this litigation, and be it further

RESOLVED, that the House of Delegates direct the editor of the KMA *Journal* to publish an editorial explaining the ramifications of the action of the Williams and Wilkins Company, and be it further

RESOLVED, that a copy of this resolution and the ensuing editorial be sent to the Williams and Wilkins Company and to the president of each state medical society.

Recommendations, Reference Committee No. 1

Resolution K, Actions taken by the Williams and Wilkins Company, introduced by W. Neville Caudill, M.D., was reviewed by the committee and other appropriate information pertaining was presented to the committee.

Mr. Speaker, I recommend the adoption and strongly urge immediate implementation of Resolution K.

(Motion was seconded and carried.)

Mr. Speaker, I move the adoption of the report of Reference Committee No. 1 as a whole.

(Motion was seconded and carried.)

Mr. Speaker, as Chairman, I wish to thank all the members of this committee for their untiring effort and help in preparing this report.

I would also like to thank Mrs. Jean Wayne for her excellent help in committee work.

REFERENCE COMMITTEE NO.1

Harold L. Bushey, M.D., Barbourville, Chairman
L. F. Beasley, M.D., Franklin
Eugene H. Conner, M.D., Louisville
William E. Pearson, Jr., M.D., Owensboro
John E. Trevey, M.D., Lexington

REFERENCE COMMITTEE NO. 2

Peter P. Bosomworth, M.D.,
Lexington, Chairman

Reference Committee No. 2 considered the following reports:

15. Report of the Scientific Program Committee
16. Report of the Scientific Exhibits Committee
17. Report of the Hospital Committee
    Allied Health Advisory Subcommittee
18. Report of the Committee on Educational Television
19. Report of the Disaster Medical Care Committee
44. Report of the Medical Education Committee
47. Report of the Committee on Medicine and Religion
45. Report of the Committee on Plans and Development, Paragraph 11 on Page 53 only
    Resolution C—Establishment of On-Call Rosters in Hospitals (KMA Board of Trustees)
    Resolution D — Self-Assessment Testing (David B. Stevens, M.D.)

Report of the Scientific Program Committee

The Scientific Program Committee met to plan the 1972 KMA Annual Meeting on November 10, 1971. During the 10 months of preparation which go into our Annual Scientific Sessions, your Committee members, Chairman and the KMA staff are continuously involved in the multitude of phone calls, personal contacts and reams of correspondence necessary in putting this program together.

Early in the Associational year, your Chairman

and the KMA President had the pleasure of meeting with 17 specialty group presidents to discuss their participation in planning this year's meeting. The Kentucky Society for Plastic and Reconstructive Surgery will join our meeting on a continuing basis for the first time this year and they are certainly most welcome.

The scientific programs of the specialty groups held in conjunction with our general sessions have proven to be valuable over the years to all concerned and provide an excellent contribution to the continuing education of our members. I am appreciative of the approval of the facilities offered for the specialty group meetings and for their splendid cooperation in the planning of the overall meeting.

Planning for each year's scientific session includes the review of previous programs in an attempt to select the most popular aspects of those sessions to compliment any new concepts presented. The Scientific Program Committee's objective is to present an appealing and educational program that will provide the maximum benefit to the members of KMA.

It has been the Committee's experience in the past that the selection of themes for portions of the scientific program has proven to be beneficial and that policy has been carried over into this year's session. The themes are designed to maintain the continuity of the program and afford an opportunity for in-depth coverage of a subject. We hope you will again find them to be profitable.

This year's program will be comprised of individual presentations and the Committee members and specialty groups have gone to great lengths to bring in who, we feel, are some of the country's most outstanding speakers.

As in the past, the South Central Bell Telephone Company will sponsor our Message Center in the Technical Exhibit Hall. This continues to be a valuable service to our Association membership and we are grateful for it.

Your Chairman is thankful to all those who assisted in the formation of this program with a special note of appreciation to the Committee members, specialty group presidents and program chairmen.

Any suggestions the membership might have for future programs would be most welcome.

R. Glenn Greene, M.D., Chairman

Recommendations, Reference Committee No. 2

The reference committee wishes to commend the Scientific Program Committee for the quality of program presented this year. We particularly wish to thank the South Central Bell Telephone Company on behalf of the Kentucky Medical Association for sponsorship of the Message Center again this year.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Scientific Exhibits Committee

The Committee on Scientific Exhibits meets late in the Associational year in order to review applications for scientific exhibit space at the Annual Meeting. As a result, it has become customary for the Committee to submit a final report prior to the meeting to insure that it will be included with all committee reports.

This year, we hope to have approximately 15 exhibits, all of which will be located along the entrance to the General Assembly Hall. The scientific exhibitors will be available to discuss their exhibits and will have special badges and ribbons to identify themselves.

The policy of judging exhibits will be discontinued this year; but exhibitors will again receive a certificate for participating in this phase of continuing medical education. Our Committee feels that the scientific exhibit is a valuable contribution to postgraduate physician education and is hopeful that everyone attending the Annual Meeting will visit the exhibits.

Arnold C. Williams, M.D., Chairman

Recommendations, Reference Committee No. 2

The reference committee is pleased to see that the quality of the scientific exhibits continues to be high and commends the committee for its activities.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Hospital Committee

The KMA Hospital Committee met twice during the Associational year on December 2, 1971 and May 25, 1972. In addition, a special ad hoc committee made up of members of the Hospital Committee and chaired by your Chairman met with hospital representatives during the year.

Over the years, the Hospital Committee has discussed the possibility of setting up a pilot educational program to assist hospitals in the proper utilization of their extended care facilities. In an effort to determine if there was a need for such a project, the Hospital Committee, with the aid of the Kentucky Hospital Association and the cooperation of hospital administrators, conducted a survey of the 17 hospital-based extended care units in the State.

Based on the results of this survey, the Hospital Committee has made the following recommendations to the KMA House of Delegates.

1. That no permanent education committee be formed to visit ECF's since there are only two hospitals who have requested this service.

2. Recommend that under the present Federal guidelines governing ECF's admissions that:

   a. The ratio of ECF beds be 1 bed per 2 physicians on the hospital staff, or

b. The ratio be 1 ECF bed to 12 acute beds.

c. The hospitals not meeting the above mentioned guidelines that have need for more acute beds, that they make application to change their ECF beds to acute beds.

3. Recommend that the Kentucky Medical Association work toward making changes in the Federal guidelines regarding the use of the ECF beds.

Acting on a recommendation from the KMA House of Delegates, a special ad hoc committee met on March 2, 1972. At this meeting, your Chairman along with members of the Hospital Committee met with representatives of KHA, the Chairman of the KMA Advisory Committee to Blue Shield, representatives of Blue Cross-Blue Shield and a number of hospital administrators to discuss ways of making physicians more aware of the many costs their patients incur during hospitalization. This meeting resulted in a number of recommendations being made which hopefully will reduce these costs.

The following recommendations were made to the KMA House of Delegates for implementation.

1. KHA, through Kentucky hospitals, furnish each medical staff

a. A list of all hospital costs as currently required under Phase II of the Economic Stabilization Program and;

b. Copies of selected patient hospital bills as noted in 2-a below.

2. The KMA Hospital Committee recommend a proposal for "Physicians' Awareness of the Cost of Quality Medical Care" to be implemented as follows:

a. KMA urge each medical staff to appoint one or more staff members to review select hospital bills and report their findings back to the medical staff. This might be done by specially appointed staff members or by the staff utilization review committee to periodically review costs in relation to utilization review and;

b. Encourage members of the KMA Hospital Committee and Advisory Committee to Blue Shield to make a similar study in the hospitals where they are staff members to be able to advise the Hospital Committee with firsthand knowledge of which methods work best in a given situation.

At the May 25 meeting of the Hospital Committee, considerable discussion was held in regard to sponsoring a Joint Commission on Accreditation of Hospitals workshop in cooperation with the Kentucky Hospital Association. The workshop is designed for hospital management and supervisory personnel, physicians, trustees, attorneys and other groups concerned with or involved with the accreditation process. Your Committee has requested that a survey be conducted by the KHA to determine the interest in such a program.

Our "Dry Run" Accreditation Teams have continued to be available to meet with representatives of hospital staffs and boards of trustees to assist them in preparing their facilities for the Joint Commission on Accreditation of Hospitals' visits. During the year, the teams had the opportunity to make a number of visits to hospitals seeking accreditation. We would like to express our appreciation to the individuals serving on these teams for their time and effort.

Other matters discussed by the Committee were the latest AMA pamphlet entitled "Categorization of Hospital Emergency Capabilities" and the progress on the proposed burn hospital sponsored by the Kentucky Firemen's Association. This Committee was also instrumental in having a letter sent to the Kentucky Hospital Association urging all hospitals in the State to establish an active on-call roster.

The KMA Allied Health Advisory Subcommittee, under the chairmanship of Lewis Dickinson, M.D., did not find it necessary to meet during the year. However, the subcommittee remains available to meet with any allied health groups to discuss matters of interest to the medical profession.

As in the past, the KMA Hospital Committee will continue to make every effort to maintain liaison with the Kentucky Hospital Association and other allied groups who are involved in hospital care of the patient.

Oscar W. Thompson, Jr., M.D., Chairman

Allied Health Advisory Subcommittee

The Allied Health Advisory Subcommittee was appointed as a Subcommittee of the Hospital Committee to initiate and maintain liaison with allied health organizations. This year, nursing homes were included within the scope of this Committee.

The Subcommittee Chairman had agreed at the December 2, 1971, Hospital Committee meeting to have a meeting with the Kentucky Nurses Association during this year.

Since that time, your Subcommittee Chairman received a letter from the Chairman of the Kentucky Nurses Association Professional Practice Committee stating her Association's discontent over the changing of the context of the statement on administration of anesthetic. The Kentucky Nurses Association also reported that they had already published statements in their state publication without waiting for further approval by the Kentucky Medical Association. Because of this action, your Subcommittee Chairman felt that there was no need for further meeting with the Kentucky Nurses Association since they had more than likely settled the problem to their satisfaction and did not wish further discussion of this subject with the Subcommittee.

No further problems have been referred to this Subcommittee by the Hospital Committee.

Lewis Dickinson, M.D., Chairman

Recommendations, Reference Committee No. 2

The Report of the Hospital Committee was reviewed with particular attention focused on recommendations dealing with guidelines for extended care facilities and acute beds. The committee endorses this portion of the recommendation. The committee also reviewed the recommendations relating to the provision of the hospital cost information to medical staff members including selected patient hospital bills. The committee wishes to call specific attention to the

desirability of implementing this recommendation so that all physicians will be aware of the cost of hospital patient service.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Educational Television

The Educational Television Committee has had a busy and profitable year. As is usual in this Committee it has been for its members a rewarding continuing education experience. We hope it has been such an experience for many KMA members.

The Committee presented two sets of interesting medical programs in the fall of 1971 and the spring of 1972. Innovations were utilized which were appropriate to our limited budget. Of these, taped post program discussions and the "block" programming techniques seemed successful.

A mail survey of KMA members was performed in regard to our spring program. The response was disappointing, but enlightening.

It appeared to the Committee that our program time of 11 p.m. was a disadvantage not only to our viewers, but also to our post-program presentations.

The quality of program presentations was good, but appropriateness to all of the KMA viewers at any one time varied considerably.

The Committee feels that further extensive efforts in the presentation of medical programs via the educational television network would not be rewarding. They do feel, however, that television is a valuable tool in continuing medical education. Other forms of closed circuit programming to the various districts in the State with two-way participation seems to be well accepted in two efforts by the University of Kentucky.

It is the feeling of the Committee that its function should be one of coordinating medical television programming from both of the State medical schools to avoid repetition and to utilize resources more effectively.

The Committee requests minimum KMA financial support for the coming year of $500 so that we may promote and evaluate any new educational television opportunities.

The Committee wishes to express its appreciation for a grant from the Kentucky Chapter of the American Cancer Society which aided in making this year's programs possible. It would also like to express its appreciation to other PANMED organizations, the University of Kentucky and the KMA Headquarters staff for their cooperation in this year's programming. The Chairman expresses his deep appreciation for the help of the Committee members, especially Frank Lemon, for a job well done.

R. K. Brown, M.D., Chairman

Recommendations, Reference Committee No. 2

The reference committee recommends acceptance of the Report of the Committee on Educational Television and agrees with the concept that a change in emphasis from program production to program coordination is in order.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Disaster Medical Care Committee

The Kentucky Medical Association Disaster Medical Care Committee had only one formal meeting in 1972, but the Committee was busy on a number of projects. Probably the most effective project of the Committee this year was the second meeting on emergency nursing, which was held in Louisville on May 11-12, 1972. The faculty for the meeting were members of the University of Louisville School of Medicine. Over 120 nurses from Kentucky, Indiana and Ohio attended. Those attending the meeting were very enthusiastic in their praise of the program.

Your Committee plans to hold another two-day meeting on May 17-18, 1973 in Louisville. The meeting should be attended by nurses from all areas of patient care, namely emergency department nurses, intensive care unit nurses, coronary care unit nurses, floor nurses, office nurses and industrial nurses. The program will continue to be sponsored by the Kentucky Medical Association, the Kentucky Hospital Association, the Kentucky Nurses Association, the Kentucky Committee on Trauma of the American College of Surgeons, and perhaps other interested groups. A registration fee was charged in 1972, and there is no reason not to continue to charge a fee which will cover the expenses of the meeting.

Your Committee, in conjunction with the State Health Department and other state governmental agencies, developed a program for disaster relief in the Commonwealth using helicopters. The final details of the program are still to be completed. Additionally, your Committee has made a very strong recommendation that the plan be tested sometime in 1973.

Your Committee has been very much concerned about the lack of disaster plans at our commercial airports. Subsequently, it was suggested that a disaster exercise be held with a simulated airplane crash at one of our commercial airports and then using the newly developed helicopter system for disaster assistance.

Your Chairman and other members of the Kentucky Medical Association continued to participate in the Committee on Emergency Medical Care under the auspices of the Comprehensive Health Planning Council. An excellent program has been proposed by this group and it is hoped that there will be some effective plans developed.

Several pieces of legislation, which were extremely important to the health of the citizens of the Commonwealth, were soundly defeated in the regular legislative session. Your Committee was particularly interested in the development of standards for ambulance service and the development of programs

for emergency medical technicians to care for patients during their transportation. The defeat of the Emergency Medical Technician Program appeared to be managed by the Kentucky Nurses Association, which may indicate to you that this Committee's preparations for the legislative session were ineffective.

Your Committee has been impressed with response from the nurses to programs on emergency medical care. We have been concerned about the lack of local programs for critical medical care for the practicing physicians. Subsequently, your Committee has asked the Program Committee for space at the 1973 Annual Meeting to present a brief and varied program for practicing physicians on the newest developments in critical medical care. The program would include an opportunity for physicians to learn various techniques which are applicable in their daily practices.

The American Medical Association Committee on Community Emergency Medical Services has suggested that state committees once again change their titles from Disaster Care Committees to Emergency Care Committees. Your Committee recommends that the title of this committee be changed accordingly.

The staff of the Kentucky Medical Association worked extremely long and hard on a number of the projects of this Committee during the past year and are to be commended for their service.

William T. Rumage, Jr., M.D., Chairman

Recommendations, Reference Committee No. 2

The reference committee commends the Disaster Medical Care Committee for its thoughtful deliberations and program development during the year and concurs in the recommendation that the name of the Disaster Medical Care Committee be changed to the Emergency Medical Care Committee.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Report of the Medical Education Committee

The Medical Education Committee occupies a unique role in that it is two separate committees, both of which have the same membership. With the establishment of the Foundation, a Continuing Medical Education Committee was formed to allow expansion of interests and activities into the area of postgraduate training. However, because of certain KMA charter commitments, and to preserve the continuity of medical education, it was desirable for the Medical Education Committee of KMA to continue its active function. Thus, to achieve administrative simplicity and enhance communication, it was determined that the membership of the two committees should consist of the same persons.

There is much interest currently concerning reeducation and the feasibility of recertification for continued membership in medical associations. As an extension of plans formulated during the last Associational year, the Education Committee conducted and completed a questionnaire survey of the State's physicians in cooperation with the Ohio Valley Regional Medical Program and the departments of continuing education of both the University of Kentucky College of Medicine and the School of Medicine at the University of Louisville. This survey, which requested that physicians express their feelings concerning the best methods for continuing education, should provide a good indication of the part KMA or the Foundation might play in the development and endorsement of future educational programs. We owe a debt of thanks to OVRMP for its efforts on behalf of this project because a bulk of the work completed was accomplished by means of its resources.

On the basis of its past activities and projected plans, the Committee lent its support and financial assistance from the Postgraduate Medical Education Fund to the KMA Educational Television Committee. Because of lack of adequate monetary resources, the ETV Committee faced possible curtailment of its activities in the area of medical programming and proposed original productions. Support for the fine efforts of the ETV Committee was readily committed.

Members of the Committee attended a number of meetings concerned with medical education during the year on behalf of their respective organizations and the Association and Foundation which included the 68th AMA Congress on Medical Education held in February, and the AMA Third National Conference of Medical Association Representatives on Continuing Medical Education.

In another direction, the Committee anticipates the possibility of working with the peer review mechanism and the medical schools on the development of remedial education programs designed to assist those physicians who have exhibited a need for additional training. If requests for grant funding are realized, some monies may be diverted from specific peer review functions to aid in the implementation of a retraining project.

As a result of the response to an AMA questionnaire regarding accreditation of KMA-sponsored educational programs, personnel from the AMA Department of Continuing Education have expressed interest in surveying both the KMA Annual and Interim Meetings from the standpoint of possible AMA accreditation. Feeling that this was a very worthwhile endeavor, the Committee has requested an accreditation Survey Team visit. If the Annual and Interim Meetings receive AMA accreditation, members attending these meetings would receive credit toward the AMA Physicians Recognition Award and, if approved, from their respective specialty societies for continuing education requirements.

We were pleased to, again this year, have members appointed to the Committee from the SAMA chapters of the two medical schools.

We would like to thank all the members for their interest and valuable participation on the Committee this year.

E. C. Seeley, M.D., Chairman

Recommendations, Reference Committee No. 2

The reference committee notes with interest the many continuing medical educational programs which were presented or stimulated through the efforts of this committee and approves of the concept of educational programs for physicians when indicated by analysis of peer review information.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Medicine and Religion

The KMA Committee on Medicine and Religion was quite active during the past Associational year. In addition to the three regular meetings of the Committee, two subcommittee meetings were held. Once again, this year the Committee invited members of the Kentucky Chaplains Association to participate in their meetings.

In an effort to improve the overall delivery of health care in hospitals and to create a better liaison between the physicians and clergy in these hospitals, the Committee is sponsoring a number of Medicine and Religion workshops to bring these two groups closer together.

On October 13, 1971, the Medicine and Religion subcommittee met in Lexington to initiate plans for their first workshop. It was decided that the first program would be presented on a regional basis and the full Medicine and Religion Committee reviewed and approved this plan at their December 8 meeting.

The first workshop entitled "Hospital Emergency Room Care" was presented on January 26, 1972, at the Kentucky Baptist Hospital School of Nursing Chapel in Louisville. The seminar was attended by approximately 125 people made up of physicians, clergy, hospital personnel and students from the various medical and theological seminaries in the area.

The Medicine and Religion Committee met again on March 29 and discussed the results of their first presentation. Based on these results, the Committee began plans for presenting a state-wide workshop this fall at the University of Kentucky Continuing Education Center in Lexington.

The topic selected for this state-wide presentation is "The Terminally Ill and Dying Patient." It was felt that this topic would stimulate many ideas which could be helpful to both the medical profession as well as theologians. All paramedical groups will also be invited to attend this seminar.

In order to finance the state-wide workshop, sufficient funds will be needed; therefore, the Committee has requested that the KMA Board of Trustees allocate a budget of $1,500 to underwrite the expenses of such a program. It was the opinion of the Committee that by sponsoring a program of this nature it would prove to be an excellent means of public relations since it will emphasize the clergy and medical professions' concern for the total health of the patient.

On the national level, I had the pleasure of continuing to serve as a member of the AMA Medicine and Religion Committee. During the year, I had the opportunity to attend national meetings in Atlanta and Chicago.

In summing up the activities of this Committee for the past year, I would like to thank the members of the Committee and members of the Kentucky Chaplains Association for giving so freely of their time to help promote a better liaison with the physicians and clergy in the State.

J. Campbell Cantrill, M.D., Chairman

Recommendations, Reference Committee No. 2

The Report of the Committee on Medicine and Religion was reviewed. The reference committee commends the Committee on Medicine and Religion on its timely programs and workshops.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Plans and Development, Portion Concerning Compulsory Continuing Medical Education

Compulsory continuing medical education was reviewed and the Committee heard information that a survey is currently being carried out in conjunction with the University of Kentucky and the Ohio Valley Regional Medical Program to determine local physicians' continuing medical education habits. It was the conclusion of the Committee that at this point in time compulsory continuing medical education is not feasible in the Commonwealth and that our efforts should be devoted to making continuing medical education attractive enough to motivate physicians to participate.

Recommendations, Reference Committee No. 2

The reference committee concurs with the sense of this report but recommends that sentence 2 of the paragraph be changed to read as follows: "It was the conclusion of the Committee that at this point in time compulsory continuing medical education is not practical in the Commonwealth and that our efforts should be devoted to making continuing medical education attractive enough to motivate physicians to participate."

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Resolution C

KMA Board of Trustees

WHEREAS, the House of Delegates of the Kentucky Medical Association feels strongly that all hospitals should provide 24-hour per day emergency room service, and

WHEREAS, we have noted with growing concern the misunderstanding of the Kentucky General Assembly in its attempt to force 24-hour per day physical presence of physicians in hospitals, a matter of impossible implementation because of manpower and costs involved, and

WHEREAS, we feel it is the duty of each hospital and medical staff thereof to work in harmony to provide whatever emergency room service is possible in a specific community, now therefore be it

RESOLVED, that the House of Delegates does, by this action, urge each medical staff to see that there is posted in every Kentucky hospital an "on-call roster" of the available physicians, and be it further

RESOLVED, that this action is taken so that KMA is in a continuing position to serve notice to all who may be interested that this is an action of the Association in behalf of better patient care, and be it further

RESOLVED, that every effort be made to improve emergency room service where possible in all hospitals throughout the Commonwealth of Kentucky, and be it further

RESOLVED, that a copy of this resolution be sent to the Governor and Lieutenant Governor of the Commonwealth of Kentucky, the Chairman of the Senate and House of Representatives, Committees on Health and the Kentucky Hospital Association.

Recommendations, Reference Committee No. 2

Resolution C, dealing with establishment of on-call rosters in hospitals, was reviewed in detail by the reference committee. The committee recommends adoption of this resolution with a re-statement of the first "WHEREAS" for purposes of clarification to read as follows: "WHEREAS, the House of Delegates of the Kentucky Medical Association feels strongly that all hospitals providing emergency services should make such services available on a 24-hour basis . . ."

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Resolution D

David B. Stevens, M.D.

WHEREAS, current knowledge of medical science is essential to practice medicine, and

WHEREAS, physicians have many continuing education programs available to them, and

WHEREAS, a voluntary self-assessment examination of his core of knowledge would aid the physician in selection of his own curriculum, therefore, be it

RESOLVED, that the KMA Committee on Continuing Medical Education prepare a grant application to the Ohio Valley Regional Medical Program to develop and administer a voluntary self-assessment examination of the basic knowledge necessary and said examination be made available to all physicians in the Ohio Valley Regional Medical Program area.

Recommendations, Reference Committee No. 2

The reference committee concurs in the sense of this resolution and the wording of the "WHEREAS"s but recommends a substitution for the "RESOLVED" portion of the resolution to read as follows: "RESOLVED, that the Kentucky Medical Association Committee on Continuing Medical Education develop and administer under the auspices of the Foundation a *voluntary* self-assessment examination of the basic (core) knowledge considered appropriate for all practicing physicians in the Commonwealth."

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Mr. Speaker, I move the adoption of the report of Reference Committee No. 2 as a whole.

(Motion was seconded and carried.)

As Chairman of Reference Committee No. 2, I wish to express appreciation to the members of the Committee and KMA secretarial staff for their cooperation and help in consideration of the matters brought before this Committee.

REFERENCE COMMITTEE NO. 2
Peter P. Bosomworth, M.D., Lexington, Chairman
C. Douglas Le Neave, M.D., Mayfield
Earl P. Oliver, M.D., Scottsville
Charles A. Webb, M.D., Ashland
Lloyd G. Yopp, M.D., Louisville

REFERENCE COMMITTEE NO. 3

John S. Oldham, M.D., Owensboro, Chairman

Reference Committee No. 3 considered the following reports:

24. Report of the Committee on Occupational Health, Physical Medicine and Rehabilitation
25. Report of the Maternal Mortality Study Committee
31. Report of the Committee on Legislative Activities
34. Report of the Committee on Environmental Quality
35. Report of the Committee on Cults
46. Report of the Interspecialty Council
    Resolution F—Medicredit (KMA Committee on Legislative Activities)

Report of the Committee on Occupational Health, Physical Medicine and Rehabilitation

The Committee on Occupational Health, Physical Medicine and Rehabilitation did not meet during the Associational year at KMA Headquarters but did hold a meeting in Frankfort to discuss legislation involving occupational health and safety standards.

At the present time, the Committee is concerning itself with gathering data on rehabilitation of spinal injuries. The spinal injuries are coming under close scrutiny by various government groups, and it is hoped that the Committee will be able to build a meaningful backlog of information on this and other subjects that are of great concern in the field of occupational health.

During a legislative year, there are always many pieces of legislation involving occupational health, workmen's compensation, etc. This year in Kentucky was no exception and your Committee has attempted to stay abreast of the various developments in areas of greatest concern.

Having just assumed the role of Chairman this year, I am hopeful that the Committee will be able to take a more active role in its specific field of responsibility during the coming Associational year.

Joseph E. Warren, M.D., Chairman

Recommendations, Reference Committee No. 3

The Report of the Committee on Occupational Health, Physical Medicine and Rehabilitation was reviewed. We would like to express our appreciation to this committee for its continued work in this field.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Maternal Mortality Study Committee

The KMA Maternal Mortality Study Committee has continued to meet whenever the number of cases involving deaths associated with pregnancy has warranted.

During the past Associational year, the Committee met on January 27 to review a number of these cases. Physicians involved in these cases were also invited to add any comments they felt pertinent. As in the past, cases were discussed anonymously and had occurred at least one year prior to the meeting in order to avoid any medical-legal involvement.

Appropriate teaching cases were then selected by the Committee for publication in *The Journal* with editorial comments intended for constructive purposes only.

John A. Petry, M.D., Chairman

Recommendations, Reference Committee No. 3

The Report of the Maternal Mortality Study Committee was reviewed and discussed by this committee. The reference committee recommends that the following phrase from Line 7 of Paragraph 2 of the report on Page 33 of the Reports Booklet be deleted, as this is not legally applicable to the present law: ". . . in order to avoid any medical-legal involvement." We recommend the acceptance of this report as amended.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Legislative Activities

National Affairs

To no one's surprise, this year has been one of many national legislative proposals that were negligible to major importance to health. The Second Session of the 92nd Congress has had nearly 3,000 bills of some medical connotations and of which 800 were of prominence to health delivery.

To everyone's surprise, no bill of basic change in health care survived the precarious shoals of national congressional chambers. Conversely, no one is bold enough to predict that such will be the case in the First Session of the 93rd Congress.

The positions of most major health bills as of June 30, 1972, are included with this report as Supplement I.

The most focused-upon bills are those proposing national health insurance. A universal debate has been smoldering throughout the year as to the desirability or the undesirability of each of these. Each has had strong advocates, and each has had strong dissenters. The bill with the most sponsors in the House of Representatives and Senate is the American Medical Association bill, the so-called "Medicredit Bill." This has 172 endorsers from the House and Senate, which is a larger number than all the others combined.

A brief summary of the main principles of each of these bills is included with this report as Supplement II.

Each of us as doctors and the only purveyors of physician care can hardly afford not to be knowledgeable of the features of these bills for national health insurance. The dialogue about them will cause public consciousness and image, which will ultimately be demonstrated by legislative enactment by national Congress is it tries to reflect the public's desires. Such being the case, we, as custodians of quality health care, can ill afford not to be informed and expressive. To default by apathy, indifference or inertia would be betrayal of our high cause and purpose of protecting and improving the public's health and welfare.

Our annual congressional visit this year afforded the opportunity to 41 doctors and wives for Washington exposure and a glimpse of our lawmakers as they proceed with national existence and hopefully national advancement.

A visit to the offices of our seven Representatives and two Senators, as well as the House and Senate Chambers, was done with verve and enthusiasm.

We also were well briefed and informed by our superb Washington AMA office under the skillful guidance of Harry Hinton, its director. We are much blessed by having such expertise with us.

We of this Committee have tried to conduct KMA national legislative affairs as we feel is expressive of what physicians of this state would think appropriate and significant. We also believe that it has been done in a traditional and dedicated manner with the people's best interest in the forefront, which has always been the physicians' primary sense of obligation.

This is an election year. Let us all do our part in the best of two great party reputations of this state and country. Without appropriate political effort, we will have inappropriate legislative response, and our Legislators more responsive to others.

The Chairman expresses appreciation to the leadership of KMA for the opportunity to have served and wishes to express grateful appreciation to all the members of the Committee who have served loyally, intelligently and forcefully.

Hoyt D. Gardner, M.D.
Chairman for National Affairs

Supplement I

STATUS OF SELECTED MEDICAL LEGISLATION

June 30, 1972

BILL NO.	DESCRIPTION	STATUS
H.R. 1	*Social Security Amendments of 1971:* Amends Social Security Act; modifies Medicare, Medicaid and maternal and child health programs and welfare system.	H Passed; S Fin. Comm. Ordered Reported
H.R. 2	*Uniformed Services Health Professions Revitalization Act:* Authorizes establishment of university for Uniformed Services Health Professions in District of Columbia area.	Conference
H.R. 10880	*Veterans' Medical Care Act of 1971:* Provides medical care for additional veterans and dependents; expands services for certain veterans.	H & S Passed (substituting language of S. 2354)
H.R. 12316 (S. 3028)	*Medical Device Safety Act:* Provides for standards and scientific review of medical devices. (Administration Bill)	H. Interstate Comm.; S. Lbr. & Pub. Wlfr. Comm.
H.R. 11728	*Health Maintenance Organization Act of 1971:* Provides federal aid for development, establishment and operation of HMO's.	H Executive Session
H.R. 12563	*Medical Emergency Transportation and Service Act:* Amends the Public Health Service Act to authorize the establishment of medical emergency transportation and service programs.	H Executive Session
H.R. 12846	*Treatment and Rehabilitation Program for Drug Dependent Members of the Armed Forces:* Provides for screening, treatment and rehabilitation of drug dependent servicemen.	H Passed
H.R. 15081	*National Heart, Blood Vessel, Lung and Blood Act of 1972:* Provides for accelerated research, development, training and public education in the fields of heart, lung and blood disease. (Similar to S. 3323)	H Interstate Comm. Reported
H.R. 15417	*Fiscal Year 1973 Appropriations for Departments of Labor and HEW*	H and S Passed
S. 3080	*Lead-Based Paint Poisoning Prevention Act Amendments of 1972:* Extends the Lead-Based Paint Poisoning Prevention Act.	S Passed
S. 3323	*National Heart, Blood Vessel, Lung and Blood Act of 1972:* Provides for accelerated research, development, training and public education in the fields of heart, lung and blood disease.	S Passed
S. 3327	*Health Maintenance Organization and Resources Development Act of 1972:* Provides federal aid for development, establishment and operation of Health Maintenance Organizations and other health care delivery systems.	S Executive Session
S. 3419	*Food, Drug, and Consumer Safety Act of 1972:* Establishes a Consumer Safety Agency to regulate safety of foods, drugs and consumer products.	S Passed
S. 3442 (H.R. 14455)	*Communicable Disease Control Amendments of 1972:* Extends and revises communicable disease control and prevention programs.	S Passed H Interstate Comm. Reported
S. 3617	*Headstart Child Development and Family Services Act of 1972:* Authorizes a national program of child care centers and establishes training program for day care personnel.	S Passed
S. 3643	*Allied Services Act of 1972:* Coordinates programs related to human resources and services.	Before S Comm. Lbr. and Public Welfare

SUBJECT: Byrnes Bill—H. R. 7741

GENERAL CONCEPT AND APPROACH: Two-part national health insurance plan covering most of the population under age 65: (1) required employer plan under private insurance for employees and their families and (2) federally operated family health insurance plan (FHIP) for low-income families with children. Provisions to encourage use of health maintenance organizations.

COVERAGE OF THE POPULATION: Employer plan—Employer required to provide coverage for his employees and their families. Special group plans for small employers, self-employed and other individuals. FHIP—Low-income families with children who meet specified income levels could voluntarily enroll. Mandatory coverage for families under (proposed) Family Assistance Plan.

BENEFIT STRUCTURE: Employer plan—Broad benefits with cost sharing of $100 annual deductible per person and 25% coinsurance for most services. Hospital: Two-day deductible and 25% coinsurance for room and board per year. Other services subject to annual deductible and coinsurance. Physicians: Annual deductible and coinsurance. Well-baby care up to age five without cost sharing. Laboratory and x-ray: Annual deductible and coinsurance. Medical appliances: Annual deductible and coinsurance. FHIP—Broad benefits. Some cost sharing depending on annual income, but none for lowest income group. Benefits include 30 days of hospital care; nursing home care (3-day substitution for one day of hospital care); all physicians' services while receiving hospital, nursing home, or home health services; 8 home or office physician visits; well-baby care up to age five; home health services (7-day substitution for one day of hospital care).

ADMINISTRATION: Employer plan—Private insurance carriers under Federal supervision. FHIP—Administered by DHEW, similar to Medicare program.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—Continues to operate. Medicaid—Limited to aged, blind and disabled. Other programs—Most not affected.

FINANCING: Employer plan—Financed by employee-employer premium payments. Employer pays 75% (65% for 1st 2 1/2 years of program). FHIP—Financed in part by premiums paid by enrollees, graduated according to income; no premium for lowest income group. Balance of costs paid from Federal general revenues. Also employers with high premium costs get subsidy payments for up to 10 employees. (not included in Bennett bill, S. 1623).

STANDARDS FOR PROVIDERS OF SERVICES: Same as Medicare. Also Professional Standards Review Organizations (PSRO) would review services provided under all plans, if PSRO is made applicable to Medicare and Medicaid.

REIMBURSEMENT OF PROVIDERS OF SERVICES: Hospitals and other institutions—Reasonable cost of services (same as Medicare). Physicians—Reasonable charges (same as Medicare). Health maintenance organizations—Per capita rate.

DELIVERY AND RESOURCES: Health maintenance organizations—would be available as an option under all plans. Must provide comprehensive services efficiently and economically. Under related bill (S. 1182), grants and loans for development, construction and payment to meet initial operating costs. Health education—Under S. 1183, grants and loans to schools for education of health professionals in short supply and improvement of health delivery.

SUBJECT: Bennett Bill—S. 1623

GENERAL CONCEPT AND APPROACH: Two-part national health insurance plan covering most of the population under age 65: (1) required employer plan under private insurance for employees and their families and (2) federally operated family health insurance plan (FHIP) for low-income families with children. Provisions to encourage use of health maintenance organizations. Endorsed by Nixon administration.

COVERAGE OF THE POPULATION: Employer plan—Employer required to provide coverage for his employees and their families. Special group plans for small employers, self-employed and other individuals. FHIP—Low-income families with children who meet specified income levels could voluntarily enroll. Mandatory coverage for families under (proposed) Family Assistance Plan.

BENEFIT STRUCTURE: Employer plan—Broad benefits with cost sharing of $100 annual deductible per person and 25% coinsurance for most services. Hospital: Two-day deductible and 25% coinsurance for room and board per year. Other services subject to annual deductible and coinsurance. Physicians: Annual deductible and coinsurance. Well-baby care up to age 5 without cost sharing. Laboratory and x-ray: Annual deductible and coinsurance. Medical appliances: Annual deductible and coinsurance. FHIP—Broad benefits. Some cost sharing depending on annual income, but none for lowest income group. Benefits include 30 days of hospital care; nursing home care (3-day substitution for one day of hospital care); all physicians' services while receiving hospital, nursing home, or home health services; eight home or office physician visits; well-baby care up to age five; home health services (7-day substitution for one day of hospital care).

ADMINISTRATION: Employer plan—Private insurance carriers under Federal supervision. FHIP—Administered by DHEW, similar to Medicare program.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—continues to operate. Medicaid—Limited to aged, blind and disabled. Other programs—Most not affected.

FINANCING: Employer plan—Financed by employee-employer premium payments. Employer pays 75 %(65% for 1st 2 1/2 years of program). FHIP—Financed in part by premiums paid by enrollees,

graduated according to income; no premium for lowest income group. Balance of costs paid from Federal general revenues.

STANDARDS FOR PROVIDERS OF SERVICES: Same as Medicare. Also Professional Standards Review Organizations (PSRO) would review services provided under all plans, if PSRO is made applicable to Medicare and Medicaid.

REIMBURSEMENT OF PROVIDERS OF SERVICES: Hospitals and other institutions—Reasonable cost of services (same as Medicare). Physicians—Reasonable charges, same as Medicare. Health maintenance organizations—Per capita rate.

DELIVERY AND RESOURCES: Health maintenance organizations—would be made available as an option for all plans. Must provide comprehensive services efficiently and economically. Under related bill (S. 1182), grants and loans for development, construction and payment to meet initial operating costs. Health education—Under S. 1183, grants and loans to schools for education of health professionals in short supply and improvement of health delivery.

SUBJECT: Scott-Percy bill—S. 1598

GENERAL CONCEPT AND APPROACH: Two-part health insurance program: (1) in-patient health care plan administered by Federal government and financed by payroll taxes and general revenues, (2) voluntary outpatient care plan through private insurance, with government subsidizing premiums for low-income families.

COVERAGE OF THE POPULATION: In-patient plan—All U. S. residents. Out-patient plan—All U. S. residents on voluntary enrollment basis.

BENEFIT STRUCTURE: In-patient plan—Hospital, nursing home and home health services. Benefit payments begin after family has paid a deductible (family health cost ceiling), varying according to family income and size. Out-patient plan—Subject to annual deductible of $10 to $50 a year, depending on family income and size. (Additional deductible of $10 to $25 for dental benefits.) Physician and hospital out-patient. Dentists: For children under 12. Other health professional: Optometrists and podiatrists. Laboratory and x-ray. Medical appliances. Prescription drugs: For chronic illnesses.

ADMINISTRATION: In-patient plan—Administered by DHEW through regional offices. Out-patient plan—Private insurance carriers under supervision of DHEW.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—Abolished. Medicaid—Would not pay for services under program. Other programs—Most not affected.

FINANCING: In-patient plan—Medicare (hospital insurance) payroll taxes diverted to new program, plus Federal general revenues if needed. Out-patient plan—Premium payments by enrolled family with premium subsidized by government for low-income families, depending on family income and size.

STANDARDS FOR PROVIDERS OF SERVICES: Similar to Medicare with additional requirements: Physicians and other health personnel must meet standards set by DHEW and may practice in any state. Health maintenance organizations must meet standards set by DHEW; can be federally incorporated if incorporation prohibited by state. Local, regional and national boards to review and study utilization.

REIMBURSEMENT OF PROVIDERS OF SERVICES: In-patient plan—To be determined by regulation. Out-patient plan—Reasonable cost as under Medicare.

DELIVERY AND RESOURCES: Health delivery committee—Committee to study health needs and make recommendations. Health maintenance organizations—Grants and loans for development and construction. Health manpower—Liberalize PHS programs for loans to medical and nursing students and special grants to medical schools.

SUBJECT: Javits bill—S. 836

GENERAL CONCEPT AND APPROACH: National health insurance program based on expansion of Medicare program to general population. Administered by Federal government and financed by payroll taxes and Federal general revenues. Includes option for alternative coverage under private insurance plans.

COVERAGE OF THE POPULATION: All U. S. residents.

BENEFIT STRUCTURE: Benefits same as Medicare, plus dental care and drugs. Most services subject to present Medicare Part B cost sharing of $50 annual deductible per person and 20% coinsurance. Hospital—90 days of care; $60 deductible, $15 copayment per day after 60th day. Nursing home—100 days of care; $7.50 copayment per day after 20th day. Physicians—Part B cost sharing. Dentists—For children under 8; 20% coinsurance. Home health services—100 post-hospital visits, plus 100 additional visits subject to part B cost sharing. Laboratory and x-ray—Part B cost sharing. Other health professionals—Podiatrists, psychologists, physical therapy; Part B cost sharing. Medical appliances—Part B cost sharing. Prescription drugs—for chronic conditions, $1 charge per prescription.

ADMINISTRATION: Federal government—Similar to Medicare. DHEW would have general administrative responsibility. Private insurance carriers (or quasi-governmental corporations) would handle claims and pay providers. Employer-employee plans—Employers may elect out of the government program by establishing an approved private insurance plan providing superior benefits. Carrier plans—Individuals may elect out by purchasing approved private insurance providing equivalent benefits.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare — Absorbed by program. Medicaid and other assistance programs—Would not pay for services under program. Other programs—Most not affected.

FINANCING: Tax on payroll and self-employment income and Federal general revenues. Tax rates—(a) 3.3 percent of earnings for employers, employees and self-employed, (b) general revenue contribution equal to 1/2 of total tax receipts. Earnings subject to tax—1st $15,000 of earnings for employee and self-employed; total payroll for employers. Employment subject to tax—Workers under social security plus

Federal, state and local government employees. Employer-employee plans—Employers and employees exempt from regular insurance tax. Employer pays at least 75% of cost of private plan.

STANDARDS FOR PROVIDERS OF SERVICES: Same as Medicare. Additional standards may be established for physicians concerning continuing education, national licensing, and qualifications for major surgery and other specialists' services.

REIMBURSEMENT OF PROVIDERS OF SERVICES: Similar to Medicare for first two years of program. Afterward, new payment methods may be established based on a study required under bill. In interim, hospitals and nursing homes receive reasonable costs of services; physicians, dentists and suppliers receive appropriate and reasonable charges. Comprehensive health service system gets reasonable cost of per capita rate for enrolled members.

DELIVERY AND RESOURCES: Comprehensive health service systems—DHEW can contract with comprehensive systems to provide health care to enrolled population. System must provide preventive services and health education and must train paramedical health personnel. Loans, grants and technical assistance provided for the development, operation and construction of comprehensive systems.

SUBJECT: Burleson bill—H.R. 4349

GENERAL CONCEPT AND APPROACH: Three-part voluntary health insurance plan—(1) an employee-employer plan, (2) plan for individuals, and (3) a state plan for the poor. All plans administered through private insurance and provide same benefits. Endorsed by Health Insurance Association of America.

COVERAGE OF THE POPULATION: Private plans—Employee-employer plan includes employees (and their families) of employers who voluntarily elect coverage. Individual plan includes persons who voluntarily elect. State plans—Voluntary enrollment for poor and uninsurable persons.

BENEFIT STRUCTURE: Broad range of benefits with cost sharing. Benefits phased in over 6-year period for private plans and 4 years for state plan. Hospital—300 days of care; $10 copayment for 1st day, then $5 per day. Nursing home—180 days of care; $2.50 copayment per day. Physicians—$2 copayment per visit. Dentists—one examination each year; most other services 20% coinsurance. Home health services—270 days of care; $2.50 copayment per day. Laboratory and x-ray—No cost sharing. Other health professionals — 20% coinsurance. Medical appliances—20% coinsurance. Eyeglasses—50% coinsurance. Prescription drugs—$1 copayment per prescription. Private plans—For employee-employer plan, annual limit for all cost sharing of $1,000 per family. State plan—Amount of cost sharing limited according to family income.

ADMINISTRATION: Private plans—administered by private insurance carriers, under state supervision. Treasury Department determines tax status of plan. State plan—Administered by private carrier under State supervision. Regulations for program established by DHEW.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—Continues to operate. Medicaid and other assistance programs—Would not pay for services under program. Other programs—Most not affected.

FINANCING: Private plans—For employee-employer plan premium paid by employers and employees, as arranged between them. Individual plan, policyholder pays entire premium. Employees and individuals who itemize deductions can take entire premium contribution as deduction on income tax return. Employers can take their entire contribution as business expense. State plan— No premium contribution required for lowest income group; for others, part of premium paid by enrollees, with amount varying according to family income. Federal and state governments pay balance of costs from their general revenues.

STANDARDS FOR PROVIDERS OF SERVICES: Same as Medicare.

REIMBURSEMENT OF PROVIDERS OF SERVICES: Hospitals and other institutions—Reasonable cost of services, based on prospectively approved rates. Hospitals prepare budgets and schedule of charges which are reviewed by a State Commission responsible for establishing charges, subject to DHEW approval. Physicians and dentists—Reasonable charges based on customary and prevailing rates.

DELIVERY AND RESOURCES: Health planning—Increased funding and authority given to state and local planning agencies. Approval of planning agency required before projects can receive funds under Federal programs. Also, Presidential Advisory Council on Health is created. Health maintenance organizations—Must be made available as an option to persons enrolled in state plan and employee-employer plans. Ambulatory health centers—Grants, loans and loan guarantees for construction and operation of centers. Health manpower—Loans and grants for students and educational institutions, with priority given to shortage areas.

SUBJECT: Pell-Mondale bill—S. 703

GENERAL CONCEPT AND APPROACH: Employers required to provide specified health benefits for their employees and families, at no cost to the employee. Authorizes creation of health services corporations to furnish comprehensive health care and operate facilities.

COVERAGE OF THE POPULATION: Employees (and their families) of business in interstate commerce and government agencies.

BENEFIT STRUCTURE: Required benefits, with limitations, as noted. Hospital—12 days a year after 1st two days. Nursing home—10 days a year. Physicians. Laboratory and x-ray. Other health professionals—Podiatrists and chiropractors. Medical appliances. Prescription drugs. Catastrophic—Coverage of medical costs, if they exceed 25% of family income.

ADMINISTRATION: Benefits administered through prepaid health plans, health services corporations or other approved methods. DHEW establishes standards and regulations for program.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare and Medicaid—Continue to operate. Other programs—Most not affected.
FINANCING: Employers pay for health benefits as cost of doing business. No charge to employees.
STANDARDS FOR PROVIDERS OF SERVICES: DHEW establishes regulations regarding facilities, quality standards, and necessity of services.
REIMBURSEMENT OF PROVIDERS OF SERVICES: As arranged by employers with providers.
DELIVERY AND RESOURCES: Health services corporations—For profit organizations to be established in an area to provide comprehensive health services (including required benefits), and operate health facilities and medical schools. Would purchase health facilities and/or make arrangements with providers of services. Funded mainly by sale of stock to state and local government, and health organizations and personnel affiliated with corporation. Corporation facilities and staff must meet national standards. Federal grants, loans and guarantees available for construction, staffing and operation. Regional planning councils—Develop plans for comprehensive health services. Would approve the budgets of health service corporations and all projects involving Federal funds.

SUBJECT: Dingell bill—H.R. 48
GENERAL CONCEPT AND APPROACH: National health insurance program providing broad benefits, administered at Federal, state and local levels, and financed by payroll taxes.
COVERAGE OF THE POPULATION: All U. S. residents.
BENEFIT STRUCTURE: Broad benefits with no cost sharing or limitations, except as noted. Hospital —60 days of care. Nursing home—No benefit. Physicans. Dentist. Home health services. Laboratory and x-ray. Other health professionals. Medical appliances and eyeglasses. Prescription drugs — Unusually expensive drugs. Specified benefits may be delayed in a state if resources are inadequate.
ADMINISTRATION: Federal government—Special board in DHEW with overall supervision of program. State—Under contract with Federal government, would establish state plan and arrange to operate program at the local level.
RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—Continues to operate, but study to be made of methods of incorporating it into the national plan. Medicaid and other assistance programs—Would not pay for services under the national plan. Other programs—Most not affected.
FINANCING: Tax on wage and self-employment income similar to social security tax. Total tax for employers and employees combined would be 4%.
STANDARDS FOR PROVIDERS OF SERVICES: Must meet state standards. If no state standards, they would be established by national board.
REIMBURSEMENT OF PROVIDERS OF SERVICES: Hospitals and other institutions—Reasonable cost of services, but subject to a maximum rate. Physicians and other professionals—Fee for service (based on fee schedule), per capita (for persons enrolled with a practitioner), or salary.
DELIVERY AND RESOURCES: Grants to students and educational institutions for training in health occupations.

SUBJECT: Griffiths-Corman bill—H.R. 22
GENERAL CONCEPT AND APPROACH: National health insurance program providing broad benefits, administered by Federal government and financed by payroll taxes and Federal general revenues. Endorsed by Committee for National Health Insurance and AFL-CIO.
COVERAGE OF THE POPULATION: All U. S. residents.
BENEFIT STRUCTURE: Broad benefits with no cost sharing or limitations, except as noted. Hospital. Nursing home—120 days of care. Physicians. Dentists —For children under age 15; later extended to age 25. Other health professionals. Laboratory and x-ray. Medical appliances and eyeglasses. Prescription drugs —For chronic and other specified illness.
ADMINISTRATION: Federal government—Special board in DHEW, with regional and local offices to operate program.
RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—Abolished. Medicaid and other assistance programs—Would not pay for covered services. Other programs—Most not affected.
FINANCING: Tax on payroll, self-employed, and unearned income, and Federal general revenues. Tax rates—(a) 1% on employee wages and unearned income, (b) 3.5% for employers, (c) 2.5% for self-employed, and (d) Federal general revenues equal to total receipts from taxes. Earnings subject to tax—1st $15,000 of earnings and income of individuals; total payroll for employers. Employment subject to tax—Workers under social security plus Federal, state and local government employment. State and local governments do not pay employer tax.
STANDARDS FOR PROVIDERS OF SERVICES: Same as Medicare with additional requirements—Hospitals cannot refuse staff privileges to physicians. Nursing homes must be affiliated with hospital which is responsible for medical services in home. Physicians must meet national standards; major surgery performed only by qualified specialists. All providers—Records subject to review by regional office. Also, can be directed to add or reduce services and to establish linkages with other providers.
REIMBURSEMENT OF PROVIDERS OF SERVICES: National health budget established and funds allocated, by type of service, to regions and local areas. Hospitals and nursing homes—Would receive annual predetermined budget based on reasonable cost. Physicians, dentists and professionals—Methods available are fee-for-service based on fee schedule, per capita payment for persons enrolled, and (by agreement) full- or part-time salary. Payments for fee-for-service may be reduced if payments exceed estimates. Comprehensive health service organizations and medical society foundations—Per capita payment for all services (or budget for institutional services). Can retain all or part of savings.
DELIVERY AND RESOURCES: Health planning —DHEW responsible for health planning, in co-

operation with state planning agencies. Priority to be given to development of comprehensive care on ambulatory basis. Health resources development fund —Will receive, ultimately, 5% of total income of programs, to be used for improving delivery of health care and increasing health resources. Comprehensive health service system—Could receive grants for development, loans for construction and payments to offset operating deficit. Manpower training—Grants to schools and allowances to students for training of physicians for general practice and shortage specialties, other health occupations and development of new kinds of health personnel.

SUBJECT: Fisher bill—H.R. 1283

GENERAL CONCEPT AND APPROACH: Credits against personal income taxes would be granted to offset the premium cost of qualified private health insurance providing specified benefits.

COVERAGE OF THE POPULATION: All U. S. residents, on voluntary basis.

BENEFIT STRUCTURE: Tax credits of 10 to 100% of cost of qualified health insurance policy, depending on annual tax payments. Voucher certificates issued to persons with little or no tax liability. Policy must provide basic coverage and one or more supplemental benefits. Low-income families exempt from cost sharing; for others, limited to $100 annually per person. Hospital—60 days of care; $50 deductible per stay. Nursing home—Substituted for hospital days on two for one basis; $50 deductible per stay. Physicians—20% coinsurance. Dentists—No benefit. Laboratory and x-ray—20% coinsurance. Other health professionals—20% coinsurance. Medical appliances —No benefit. Prescription drugs—20% coinsurance. Catastrophic coverage—$300 deductible per family. Other health professionals, prescription drugs, additional hospital days (beyond 60) and catastrophic coverage are the supplemental benefits available at an additional premium.

ADMINISTRATION: Private insurance carriers issue policies. State insurance departments certify carriers and qualified policies. Federal board establishes standard for program. Treasury Department processes tax credits. DHEW issues voucher certificates.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—Continues to operate. Medicaid and other assistance programs—Would not pay for services under program. Other programs—Most not affected.

FINANCING: Financed from Federal general revenues.

STANDARDS FOR PROVIDERS OF SERVICES: By contract between DHEW and state medical societies, review boards (PRO) established to review charges, utilization and quality of services for this program and other Federal programs; provisions for hearings and appeals, disciplinary action and recourse to courts. DHEW reviews and implements decisions.

REIMBURSEMENT OF PROVIDERS OF SERVICES: PRO boards review charges (see above).

DELIVERY AND RESOURCES: The Federal board is directed to develop programs for effective use of manpower and resources.

SUBJECT: Fulton-Broyhill bill—H.R. 4960 (AMA Medicredit Bill)

GENERAL CONCEPT AND APPROACH: Credits against personal income taxes would be granted to offset the premium cost of qualified private health insurance providing specified benefits. Endorsed by American Medical Association.

COVERAGE OF THE POPULATION: All U. S. residents, on voluntary basis.

BENEFIT STRUCTURE: Tax credits of 10 to 100% of cost of qualified health insurance policy, depending on annual tax payments. Voucher certificates issued to persons with little or no tax liability. Policy provides basic and catastrophic benefits. Hospital—60 days of care; $50 deductible per stay. Nursing home—Substituted for hospital days on two for one basis; $50 deductible per stay. Physicians—20% coinsurance. Dentists—No benefits. Laboratory and x-ray —20% coinsurance. Prescription drugs—20% coinsurance. Catastrophic coverage—Additional hospital days and medical appliances covered after corridor deductible (out-of-pocket payment) which varies according to income. Total coinsurance (for physicians, laboratory and x-ray) limited to $100 per family.

ADMINISTRATION: Private insurance carriers issue policies. State insurance departments certify carriers and qualified policies. Federal board establishes standards for program. Treasury Department processes tax credits. DHEW issues voucher certificates.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—Continues to operate. Medicaid and other assistance programs—Would not pay for services under program. Other programs—Most not affected.

FINANCING: Financed from Federal general revenues.

STANDARDS FOR PROVIDERS OF SERVICES: No provision.

REIMBURSEMENT OF PROVIDERS OF SERVICES: No provision.

DELIVERY AND RESOURCES: The Federal board is directed to develop programs for effective use of manpower and resources.

SUBJECT: Hogan bill—H.R. 817

GENERAL CONCEPT AND APPROACH: Program for coverage of catastrophic illness which would pay medical expenses above a specified amount, depending on family income. Administered by private insurance companies under state supervision and financed by premium payments and Federal subsidy.

COVERAGE OF THE POPULATION: All U. S. residents, on voluntary basis.

BENEFIT STRUCTURE: All services eligible as medical expense deductions under the income tax law may be covered after family expenses exceed a specified amount (deductible), which varies according to family income and size. There is no deductible for low income families but the deductible rises rapidly as income increases. Expenses paid by other private insurance or government programs can be counted toward the deductible.

ADMINISTRATION: Private insurance carriers would issue and administer the catastrophic insurance policies. State insurance department would design and establish the plan. Federal government—DHEW would establish regulations for program.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—Continues to operate. Medicaid and other assistance programs—Would not pay for services covered under the program. Other programs—Most not affected.

FINANCING: Policyholders would pay premium for insurance with subsidy from Federal general revenues. Premium rate—DHEW would determine actuarial value of policies and could establish a premium rate lower than the actuarial value, to encourage widespread enrollment. Federal government would pay carriers (from general revenues) the difference between the actuarial value and the premium rate. Reinsurance—Federal government would arrange to reinsure the insurance risk; carriers would pay the reinsurance premiums.

STANDARDS FOR PROVIDERS OF SERVICES: No provision.

REIMBURSEMENT OF PROVIDERS OF SERVICES: No provision.

DELIVERY AND RESOURCES: No provision.

SUBJECT: Hall bill—H.R. 177

GENERAL CONCEPT AND APPROACH: Two-part national health insurance program—(1) State plan of health insurance for the poor providing basic and catastrophic coverage, and (2) Federal program of catastrophic protection for the rest of the population.

COVERAGE OF THE POPULATION: Poor—All medically indigent persons. General population—All persons not medically indigent.

BENEFIT STRUCTURE: All services eligible as medical expense deductions under the income tax law may be covered. Poor—Insurance providing basic coverage of medical care, with value equal to average health care costs, and catastrophic protection of additional costs. No cost sharing. General population—Coverage of 90% of family health care costs after the first $5,000 of expenses ($1,000 for the aged). Expenses paid by private insurance or public programs can be counted toward this deductible amount.

ADMINISTRATION: Poor—Private insurance companies would issue insurance policies and administer claims. DHEW would establish plan if state does not. General population—Administered by DHEW, using same procedures and requirements as Medicare, if possible.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Poor—Would replace Medicaid Program. General population—No specific reference. DHEW to report on laws that need to be changed.

FINANCING: Poor—Federal and state general revenues. Federal pays 85% of cost of basic coverage. State pays remaining costs and cost of catastrophic protection. General population—Financed by special tax on wages, self-employment income, and other income of individuals. Tax rate—.4%. Earnings subject to tax—Sum of an individual's wages, self-employment income, and other earned or unearned income over $2,000, up to a maximum of $7,800. Employment subject to tax—Same as social security.

STANDARDS FOR PROVIDERS OF SERVICES: Poor—No provision. General population—Same as Medicare, as much as feasible.

REIMBURSEMENT OF PROVIDERS OF SERVICES: Poor—No provision. General population—Same as Medicare, as much as feasible.

DELIVERY AND RESOURCES: No provision.

SUBJECT: Long bill—S. 1376

GENERAL CONCEPT AND APPROACH: Federal program for coverage of catastrophic illness which would pay expenses for hospital and medical care above a specified amount. Program would be administered through Medicare program and financed by special payroll taxes.

COVERAGE OF THE POPULATION: Persons under age 65 insured under social security and their families. State and local governments may cover their employees under special arrangements.

BENEFIT STRUCTURE: Covers same types of benefits as Medicare. Hospital and nursing-home expenses covered after 60 days of hospital care; subject to copayment of $15 per day for hospital and $7.50 for nursing home. Other medical expenses covered after first $2,000 incurred by family, subject to 20% coinsurance.

ADMINISTRATION: Administered through Medicare program (by DHEW) under which private carriers handle claims and pay providers of services.

RELATIONSHIP TO OTHER GOVERNMENT PROGRAMS: Medicare—Continues to operate. Medicaid and other assistance programs—Would not pay for services under program. Other programs—Most not affected.

FINANCING: Financed by payroll taxes, similar to Medicare. Tax rates for employers, employees, and self-employed—.3% initially rising to .4% ultimately. Earnings subject to tax—First $9,000 of earnings. Employment subject to tax—Workers under social security.

STANDARDS FOR PROVIDERS OF SERVICES—Same requirements and standards as Medicare.

REIMBURSEMENT OF PROVIDERS OF SERVICES: Same provisions as Medicare. Hospitals and other institutions—Reasonable costs of services. Physicians and suppliers—Reasonable charges.

DELIVERY AND RESOURCES: No provision.

Recommendations, Reference Committee No. 3

The Report of the Committee on Legislative Activities was reviewed and discussed with interest.

National Affairs: The portion of the report concerning National Affairs was reviewed and the committee would like to commend this portion of the report for your reading as well as for the information concerning the status of selected medical legislation.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

State Affairs

The Committee on Legislative Activities is always busy on state affairs during the year the Kentucky General Assembly is in session. The Committee met on November 11, 1971, and on January 5, January 13, January 27, February 10, February 24, March 9 and March 16, 1972. There were meetings every two weeks while the Assembly was in session with members of the Quick Action Committee in attendance and a representative of the Woman's Auxiliary to KMA invited to all meetings.

Fred C. Rainey, M.D., a member of the Committee, and Joseph Hamburg, M.D., Dean of Allied Health Professions at the University of Kentucky School of Medicine, at the request of the Chairman for State Affairs, testified before committees of the General Assembly.

There was a considerable amount of work and planning done prior to the 1972 session. The KMA-proposed preliminary legislative goals were published in the May, 1971, issue of the *KMA Journal* and were made available to all interested parties.

Immediately after the May, 1971, election, physician Key Men were appointed for State Senators and Representatives who would be unopposed in the November election. This permitted an earlier rapport between the physician Key Man and his Legislator. The balance of the physician Key Men were appointed after the November election.

It is of great importance to KMA's legislative effort that physician Key Men function more effectively than they have previously. The Key Man System is only as usable as participation will allow it to be.

A new experimental program of holding a Key Man Orientation Conference in each Congressional District was attempted. The first was held on October 18, 1971, in the First Congressional District and was conducted by Fred C. Rainey, M.D. The attendance was poor, and it was concurred that the one state-wide meeting be continued. The state-wide Key Man Orientation Conference was held in Frankfort on January 5, 1972. John P. Stewart, M.D., a Legislative Committee member, served as host and chairman. This conference was attended by 40 key men and women who braved the ice and snow on one of the worst days of the winter. The Honorable Julian Carroll, Lieutenant Governor of the Commonwealth of Kentucky, was a guest speaker.

Representatives of the Kentucky Optometric Association, the Kentucky Podiatry Association, the National Pharmaceutical Council, the Pharmaceutical Manufacturers Association, the Kentucky Pharmaceutical Association and a State Senator and State Representative have all attended meetings with the KMA Legislative Committee and the Quick Action Committee to discuss legislative proposals.

Letters were written to the 18 medical specialty groups prior to the session of the General Assembly requesting information on any legislative proposals, and each was asked to name a legislative representative. Replies were received from approximately one third of the groups.

Over 1,000 bills were introduced into the two Houses of the General Assembly. All bills were carefully scanned by KMA staff for a determination of legislation with health or medical interest. There were 96 bills in which we had some interest. KMA had a number of legislative proposals, and amendments were made to other bills.

Following are a few of the bills in which we had an interest:

KMA-sponsored Senate Bill 107 was passed and will apply a five-year legal action limitation for physicians, dentists and hospitals for alleged negligent acts or omissions.

Senate Bill 118, a KMA proposal, received favorable action and will exempt physicians from response in damages for action taken as members of any review committee or board evaluating the medical acts of other physicians.

Senate Bill 226, the KMA Accreditation Bill, was never reported out of the Senate Business Organizations and Professions Committee. However, no chiropractic bills were introduced although the Chiropractic Association spent a considerable amount of monies in direct mail circulating testimonial letters in an effort to be included under the Kentucky Workmen's Compensation Laws.

Senate Bill 224, which creates a State Board of Medical Licensure, secured favorable action, but was amended in the Senate to delete the provisions covering paramedical personnel. The new Medical Licensure Board will be composed of six physicians and one osteopath. Later in the session, KMA had bills introduced regarding physicians' assistants—Senate Bill 348 and House Bill 610—with both bills failing to get out of the Health and Welfare Committee of either House.

House Bill 326, the KMA Blood and Tissue Bill that would have amended a bill we had passed in 1968 to add "no warranties of any kind or description," was tabled by the Senate, which had 17 lawyers as members.

KMA-backed House Bill 616, which requires at least one and not more than three members of boards of health in counties containing a first-class city to be a physician, passed both Houses.

Other bills of interest include legislation on the following subjects:

Generic Drugs—Four bills were introduced—House Bills 7, 43 and 427 and Senate Bill 239. The least objectionable bill, House Bill 427, passed both Houses and is now law. Actually this legislation combined a labeling bill, which has had the endorsement of AMA, with a Generic Drug Bill that will establish a Drug Formulary Council. Physicians have options under both proposals.

House Bill 10, a Good Samaritan Bill not promoted by KMA, has been signed by the Governor.

Senate Bill 184, a Workmen's Compensation Bill, was amended at our request to define medical, surgical and hospital treatment. The original exclusion of this definition could have permitted payment to chiropractors.

Senate Bill 274, a Comprehensive Controlled Substance Act, carried a KMA amendment deleting a section of the bill which would have permitted

any Federal, State, county or municipal peace officer to inspect physicians' offices. Enforcement will now be limited to designated agents of the Department of Health.

Senate Bill 283 establishes a Kentucky Health Facilities and Certificate of Need Board. A KMA amendment excludes private offices and clinics of physicians.

House Bill 407 deletes smallpox from immunization required for school enrollment.

House Bill 544 establishes a new State Board of Health composed of 20 members to include members of allied health groups and consumers of health services with the physician membership to consist of the Commissioner of Health and three physicians experienced in community or public health medicine.

House Bill 294, the Environmental Protection Bill, would have reorganized all environmental functions into a new governmental agency. This bill was passed by both Houses, but was never enrolled on the final legislative day.

A copy of all legislative proposals is maintained in the Headquarters Office.

Once again, this Committee cannot emphasize strongly enough the absolute necessity of physicians participating at the local level, not only in legislative affairs, but in primary and general elections as well. So often the members of our Committee hear from Legislators that the physicians in their local area have not been in contact with them. We urge all physicians to become interested in legislative matters, to stay abreast of legislative trends, and to effectively communicate, on a continuing basis, their opinions to their respective Legislators. We also strongly urge each physician to support the candidate of his choice both financially and by active campaigning on behalf of the candidate. It is extremely important for all physicians to maintain rapport with their Legislators and even more so for the Key Men so assigned.

I wish to express appreciation to those members of the Committee on Legislative Activities, to the Quick Action Committee, the KMA Board of Trustees and to the KMA House of Delegates for their continued support and understanding.

William W. Hall, M.D.
Chairman for State Affairs

Recommendations, Reference Committee No. 3

State Affairs: The committee reviewed the portion of the report dealing with State Affairs. This committee again wishes to express our gratitude to the participants in the Key Man Program and others who gave so much of their time. We urge that continued efforts be made to strengthen the Key Man system as well as the absolute necessity of physicians participating at the local level not only in legislative affairs but in primary and general elections as well.

The reference committee wishes to express appreciation to the Quick Action Committee for its usefulness.

The reference committee wishes to commend Doctors Hoyt D. Gardner and William W. Hall for their untiring efforts on the Legislative Activities Committee.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Environmental Quality

There have been attempts made on three different occasions to hold a meeting of this Committee. It has been impossible to generate enough members for a quorum at any of these meetings.

The Committee on State Affairs, because of other pressing commitments, deemed it inadvisable to become involved in the 1972 General Assembly regarding Environmental Control Legislation. The Legislation passed by the General Assembly, HB 294, removed many environmental protection functions and/or agencies from the jurisdiction of the Kentucky Department of Health.

In spite of the fact that KMA did not necessarily support all the changes brought about by HB 294, representatives of the Association were not officially requested to testify at any hearing prior to passage of the Legislation.

The Chairman discussed the matter on many occasions with members of the State Board of Health and the Commissioner of the Health Department, and other representatives of various agencies involved with control of air and water pollution.

The Committee feels that Environmental Control has gotten into the realm of politics to the point where KMA input is negligible. We find ourselves in a position where we satisfy no one from the standpoint of the Association's activities in this field.

The Committee feels that county medical societies and local boards of health have a much better understanding of various environmental problems in their particular geographic area and should have greater opportunity for true medical input. It is felt, because of the divergent nature of the problems within the State, that no state-oriented group can be nearly as effective as the local groups mentioned above.

Based on the above reasons, it is the feeling of the Committee on Environmental Quality that they should be called upon to meet only when specific problems of the environment, which might have statewide implications, are apparent and it is felt that KMA should make some policy statement that would set forth Association policy on a specific problem. Otherwise, the Committee feels that local problems should be handled by county medical societies and local boards of health.

John E. Trevey, M.D., Chairman

Recommendations, Reference Committee No. 3

The Report of the Committee on Environmental Quality was reviewed and discussed. We would like to commend them for their work and suggest that

they pursue environmental problems such as: water, air pollution, and sewage control through the Regional Health Planning Councils.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Cults

The Committee on Cults met in January of 1972 to discuss a partial supportive role for the Committee on Legislative Activities and the General Assembly session. The Committee concerned itself with monitoring various chiropractic and other quackery activities in the State and serving as a distributor of information to the Board of Trustees and the legislative committees.

No new business was brought to the attention of the Committee during the year.

Unfortunately, the proposed accreditation bill for licensure in the healing arts was not supported in the General Assembly and was not reported out of committee and was therefore not passed.

The Committee on Cults has now requested the officers of the Board of Trustees to investigate the total charge for this Committee in relation to the needs of the Association.

I would like to express thanks to the other members of the Committee who were helpful during this year.

David B. Stevens, M.D., Chairman

Recommendations, Reference Committee No. 3

The Report of the Committee on Cults was discussed and reviewed by the committee. We questioned Doctor Stevens on his interpretation of the fourth paragraph concerning the charge for the committee in relation to the needs of the Association. He requested that his committee be instructed as to what priority this would be placed at the next Legislature.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Interspecialty Council

The Interspecialty Council held one meeting on January 19, 1972, and plans to meet again prior to the Annual Meeting.

Our initial meeting this year was devoted to a reorientation of the purposes of the Council and to a discussion of its value to the individual specialty groups. It is felt that the Council could have several functions but perhaps the greatest advantage of such a group is in communications and for that reason, initial consideration has been given to the possibility of providing administrative services to specialty groups through the Headquarters Office. A dollar rate for this service has been established by the KMA Board of Trustees and some groups have already begun utilizing these services.

Long range plans for the group include coordination of legislative matters and problems of general continuing medical education programs and other projects of common concern to Kentucky physicians and their patients. We are hopeful that more specialty groups will utilize the meeting facilities and other services of the Headquarters Office in the coming months.

An effort will be made to have a meeting of the Council later in the summer so as to demonstrate the addition to our building and the marked increase in services available to the specialty groups.

Robert N. McLeod, Jr., M.D., Chairman

Recommendations, Reference Committee No. 3

The Report of the Interspecialty Council was reviewed. We noted that this report should be considered as a progress report only as there are several unresolved problems.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Resolution F

KMA Committee on Legislative Activities

WHEREAS, there is increasing concern in the Congress and by the public about the enactment of any program for national health insurance, and

WHEREAS, many proposals for national health insurance have been introduced in the Congress, and

WHEREAS, the medical profession is concerned for the continued development of quality medical care and for the availability to all persons of insurance protection providing comprehensive health care benefits, and

WHEREAS, the medical profession believes that any national program should build upon the strengths of our present system of health care delivery, without detrimental and radical restructuring, but offering a variety or pluralistic means of health care delivery, and

WHEREAS, one bill introduced in the Congress and known as Medicredit (S. 987 and H.R. 4960), formulated by the American Medical Association, embodies beneficial and essential principles which should be embraced within a program for national health insurance, now therefore be it

RESOLVED, that the Kentucky Medical Association does hereby endorse the Medicredit program and does further recommend that the following basic Medicredit concepts be considered in any national health insurance:

That individuals should have available to them insurance protection, underwritten by risk-bearing insurance companies, providing comprehensive basic health protection and also including protection against the catastrophic costs of illness;

That pluralistic means of health care delivery should be afforded, with the individual having the freedom of receiving care from qualified providers of his choice;

That any federal funding should be provided

through general revenues, with government subsidy or assistance related to the individual's ability to pay;

That cost sharing by the beneficiary, while fostering individual responsibility, should be reasonable and not act to prevent access to health care;

That insurance policies or plans be qualified by appropriate governmental regulatory bodies, and be it further

RESOLVED, that this Medicredit endorsement and support for basic Medicredit principles be communicated to appropriate members of the Congress, including members of the House Ways and Means Committee and the Senate Committee on Finance, as well as to the Board of Trustees of the American Medical Association.

Recommendations, Reference Committee No. 3

Resolution F—Medicredit, introduced by the KMA Committee on Legislative Activities, was discussed and reviewed by the committee. Unanimously, we take exception to the need for such legislation realizing that private enterprise is the best solution, but recommend that the House of Delegates adopt this resolution as worded and carry out its intent.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Mr. Speaker, I move the adoption of the report of Reference Committee No. 3 as a whole.

(Motion was seconded and carried.)

Mr. Speaker, as Chairman, I wish to thank the members of this committee for their help in preparing this report and also a note of thanks to our secretary, Mrs. Patricia Ballard.

REFERENCE COMMITTEE NO. 3
John S. Oldham, M.D., Owensboro, Chairman
Robert G. Overstreet, M.D., Louisville
Harvey A. Page, M.D., Pikeville
James G. Wilhite, M.D., Lexington
William R. Yates, M.D., Hebron

At this time, Doctor Greathouse introduced Fred C. Rainey, M.D., Chairman of the KEMPAC Board of Directors, who presented his annual report as follows:

Mr. Speaker, Fellow Delegates and Guests—

As Chairman of the Board of Directors of KEMPAC, I am most pleased to have the opportunity to give this report on KEMPAC activities. As I am sure all of you are aware by now, we are celebrating our Tenth Anniversary and I cannot think of a more appropriate time to report to you that our current membership is 1,332, an all-time high for KEMPAC. In addition to this, I am delighted to be able to report to you that 72% of our KEMPAC Board members are now sustaining members. The entire KMA Board of trustees are members of KEMPAC and we have six counties where we have 100% of the physicians as KEMPAC members—Pike, Trimble, Meade, Laurel, Henry and Bracken.

I recently compiled statistics as to our support-win record over the last six years. I am pleased to report to you that during the past six-year period of the candidates which we supported in primary races, 89.25% won. Of the candidates which we supported in general elections during this six year period, 63.66% were elected to office; certainly, a record of which we can be justly proud.

Until 1967 our membership, and therefore, our budget, was not adequate to allow us to participate in State races. Since that time, however, we have participated in U.S. Senatorial races, U.S. Congressional races, and State races for the House and Senate. May I remind you that *only* from dues money do we have funds for candidate support; therefore, the more members we have, the more effective we may be.

This year we have utilized a multiphasic program for our membership efforts aimed at the local level and they are now beginning to pay off. We have utilized direct mail membership letters, articles in the *Journal of KMA,* articles in the *KAFP Journal* and perhaps most important of all, personal contact at the local level. In the field at the present time are requests to all specialty groups and over 20 county medical societies to permit us to appear before their respective groups to discuss in detail our organization and our goals. Also, for the first time in our history we have established communication with our members through a monthly newsletter, *KEMPAC TOPICS,* which is mailed on a regular basis to all KEMPAC members. We feel this not only serves to keep our membership informed and aware that we are active and alive, but, hopefully, it will prove to be a valuable membership retention tool, since we have chronically experienced the problem of membership renewal.

I should also point out to you, that on April 7, of this year, the new Federal Election and Campaign Act became effective—a law that is both detailed and confusing. I will not discuss the details here, but merely wish to offer any assistance our office might give to you in your campaign activities.

I wish to recognize and pay tribute to one of our own, Doctor Hoyt D. Gardner, who is now completing his second term as AMPAC Board Chairman, the only Kentuckian ever to serve in this capacity. I should also report to you that AMPAC has been extremely cooperative with our KEMPAC Board and that we have an effective working relationship.

I must stress to you at this point, that I personally feel, even though we enjoy a record membership, that we are at the crossroads with KEMPAC and that we must cooperatively and collectively continue forward if we are to reach the goals which all of you deserve. I plead with each of you, if you are not now a KEMPAC member that you become one now, at our KEMPAC booth tomorrow and continue your membership on an annual basis.

We are most grateful to you, the House of Delegates, and to the KMA Board of Trustees for your support and understanding and I wish to express my appreciation to the members of the KEMPAC Board, the Woman's Auxiliary to KMA and to our staff.

In 1971, as in past years, the KMA House of Delegates reaffirmed its belief in the objectives of KEMPAC and AMPAC and recommended 100% participation by doctors and their wives. It further

recommended reaffirmation of KMA policy that there be county society billing in order to encourage this participation, and recommended a vote of endorsement and encouragement of the KEMPAC organization to continue its worthwhile political efforts on the behalf of our free enterprise system and the freedom of the art and science of medicine.

I specifically request that you not only reaffirm this endorsement, but that you work individually on a personal level with your colleagues and collectively at the county level so that we may in fact, double our membership and thereby vastly increase our effectiveness as the political arm of free and private medicine.

A motion was made, seconded and passed for the House of Delegates to reaffirm its belief in the objectives of KEMPAC.

REFERENCE COMMITTEE NO. 4

Clinton Ray Potts, M.D., Louisville, Chairman

Reference Committee No. 4 considered the following reports:

12. Report of the Kentucky Foundation for Medical Care, Inc.
14. Report of the Board of Directors, Kentucky Physicians Mutual, Inc.
20. Report of the Advisory Committee to Blue Shield
21. Report of the Advisory Committee to Blue Cross
33. Report of the Committee on Community and Rural Health
36. Report of the Committee on Health Care of the Poor
37. Report of the Committee on School Health, Physical Education, and Medical Aspects of Sports
39. Report of the Committee on Public Relations
5. Report of the Chairman, Board of Trustees, Paragraph 4 on Page 12 relating to the Ad Hoc Committee on Electronic Data Processing only

Resolution A—Utilization of Peer Review Mechanisms (KMA Board of Trustees)

Resolution B—Cost of Hospital Care (KMA Board of Trustees)

Resolution E—Remuneration for Insurance Reports (Fayette County Medical Society)

Resolution I—Professional Standards for Athletic Trainers (Madison County Medical Society)

Resolution J—Free Enterprise Medical Care Committee (Daryl P. Harvey, M.D.)

Resolution L—Concern Regarding State Hospitals by the Council of the Kentucky Psychiatric Association (Campbell-Kenton County Medical Society)

Resolution O—Peer Review Committees (KMA Board of Trustees)

Resolution P—Disagreements over Fees (Fayette County Medical Society)

Report of the Kentucky Foundation for Medical Care, Inc.

President's Report

I am extremely pleased to present, in this report, the accomplishments of our new Foundation upon the completion of its first year of operation. In many respects, this has been a difficult year for the Foundation, as it would be for any project of such far-ranging effects that has newly begun, but much has been accomplished. I feel we can be justifiably proud of our achievements thus far and can expect more and better accomplishments in the years to come.

Many questions have arisen during this first year concerning the need for a Foundation and what the Foundation is supposed to be and do. Simply stated, the Foundation is chartered to conduct whatever affairs its originators may desire. It assures direct physician involvement in the development and administration of health-related community projects while assuring the citizens of this Commonwealth the benefit of the experience, expertise and judgement that only physicians can provide. As indicated in our Bylaws, the main initial thrust of our Foundation is and has been in the area of peer review. This does not mean, however, that peer review is the Foundation's only activity nor that other activities are secondary to peer review. The Foundation has been designed with enough flexibility to allow it to change its role, organization, mode of function and direction to meet whatever demands that may be levied on the medical community by social pressures, legislative enactments, innovative medical techniques and our own wishes for professional improvement and health care delivery. It cannot be overly-emphasized that, with its malleable structure and idealistic orientation, the Foundation is not merely a beneficial and efficient vehicle for physician involvement and health improvement, but, moreover, is a vital imperative.

In the few brief months of its existence the Foundation has, indeed, progressed admirably. Since the beginning of the Associational year, the Board of Directors has been appointed and actively functioned, the Foundation has become incorporated, it has received tax-exempt categorization with the Internal Revenue Service, committee functions have been formulated and membership appointments made, and definite organizational identity has evolved. The particular accomplishments of the various Foundation committees are too numerous to comment on, but we owe our gratitude to the chairmen and committee members for their efforts in pioneering Foundation operations.

The functions of one committee are worthy of particular note. The Special Ad Hoc Committee to

Study Health Care Costs, which was formulated by the KMA Board of Trustees, is comprised of representatives of health care and health-oriented organizations in existence in the State. Because of the orientation of that committee and its avowed reliance on joint participation and peer review for resolution of problems associated with the cost of health care services, it was mutually agreed that its endeavors would be coordinated by the Foundation. For this reason, the final report of this Committee is included in this section with the other Foundation committees. The importance of this Committee and its efforts should be recognized from the perspective that, for the first time in Kentucky, a number of major health groups in the State are mutually and vigorously contributing to a concerted effort to combat a common problem on behalf of all the citizens of the Commonwealth.

Another area of Foundation involvement in which we can be suitably proud, is peer review. Most of Kentucky's accomplishments in this field are history. Recently, however, a new development has emerged that, hopefully, will move us even further toward our goal of comprehensive medical service evaluation. In an attempt to satisfy utilization review program requirements, subcommittees, composed of members of the major specialty societies, have been appointed to formulate appropriate standards of care for the most common diagnoses occurring within their specialties. When this information is published in a concise format, it should serve as a great aid to peer review committees, hospital utilization review committees, third party carriers and individual practitioners in making prospective determinations of quality care.

In explanation of the Foundation's conceptual development and priorities, it has been our good fortune and extreme honor to appear at a number of KMA Trustee District meetings to meet with our supporting members. Without their understanding and cooperation this new arm of Kentucky medicine would not be possible. Their assistance, along with the fine support we have received from the KMA Board of Trustees, has made this year a profitable one.

Henry B. Asman, M.D., President

Board of Directors
Kentucky Foundation for Medical Care

In this first year of active operation, the Board of Directors has been extremely active in determining organizational policy and in establishing guidelines for various Foundation activities. Members of the Board of Directors are selected by means of representative appointment by the KMA Board of Trustees. The KMA Trustees constitute the entire membership of the Foundation although provisions for the expansion of membership will undoubtedly be implemented in the future. As specified in Report No. 24 (KMA Medical Economics Committee) to the 1971 House of Delegates, the Board consists of five ex-officio members: the KMA President, President-Elect, Immediate Past-President, Chairman of the KMA Board of Trustees, and the KMA Executive Director; five trustees selected by the KMA Board of Trustees, and five members selected from the KMA membership at large.

After approval of the establishment of the Foundation by the 1971 KMA House of Delegates, the Board of Directors first met informally as the incorporators of the Foundation on November 4, 1971. At this meeting, the Foundation's Articles of Incorporation, which had been formulated by the Medical Economics Committee and drafted by legal counsel, were officially adopted and signed. Officers were nominated and elected for one-year terms. They were Henry B. Asman, M.D., Louisville, President; Marvin A. Bowers, Jr., M.D., Louisville, Vice-President; Robert G. Cox, KMA Executive Director, Louisville, Secretary; and Faull S. Trover, M.D., Madisonville, Treasurer. In addition an Executive Committee of the Board of Trustees was appointed. A narrative of the Foundation's goals and projected methods for their accomplishment was reviewed and approved for submission to the Internal Revenue Service for consideration of tax-exempt status.

During the remainder of the year, three regular meetings were held which dealt primarily with the further identification of exact objectives. All actions taken by the original incorporators were ratified and the Foundation Bylaws were formally executed. Throughout this period, negotiations continued with IRS for approval of tax-exempt status. On the basis of these dealings various committee adjustments were made because of IRS rulings and joint Foundation Board-KMA Trustee Board decisions. The KMA Health Careers Committee was transferred for operation under the Foundation with the new title of Health Manpower and Placement Services Committee, as was the Medical Education Committee. However, because of certain charter agreements with IRS, it was necessary for this committee to retain active involvement in KMA affairs. For this reason, with the additional title of Continuing Medical Education Committee, this group functions under both KMA and the Foundation, and its final report appears with the other KMA reports. A new Committee, the Business Management and Services Committee was suggested for function under KMA to continue some of the efforts of the now deleted Medical Economics Committee and to offer tangible benefits to the KMA membership in the form of auto leasing plans, insurance programs, travel plans, etc. Emphasis centered on peer review as the primary thrust of all Foundation operations. The two major areas of endeavor decided upon for most vigorous pursuit in the peer review field were the establishment of a comprehensive program of utilization review data compilation, and seeking supplemental funds for this project external to organized medicine, and the publicizing of the affirmative value of peer review. In the course of continued dealings with the Internal Revenue Service, it was determined that because of a question concerning professional versus public interest, the Liability Insurance Committee should be transferred for operation to KMA. On the basis of this transferral, the Internal Revenue Service granted the Foundation's request for tax-

exempt status on April 28.

To accomplish the goal of development of health care facility utilization statistics, active communication was begun with various agencies of the federal government in an effort to obtain grant funding for the utilization project. With the mutual agreement of all organizations concerned, responsibility for coordination of the activities of the Special Ad Hoc Committee to Study Health Care Costs was given to the Foundation's Board of Directors because of this Committee's reliance on peer and utilization review as the most effective method for controlling and monitoring health costs, and the necessity for wider publicity for care evaluation endeavors initiated by medically related organizations.

Upon a recommendation by the Health Manpower and Placement Services Committee, the Board of Directors granted endorsement on behalf of organized medicine to the Renal Dialysis training program being developed at the University of Kentucky. In the past, such approval came from the KMA Board of Trustees upon recommendation by the old Health Careers Committee; but with the transferral of this Committee to the Foundation, the responsibility for such endorsement is now held by the Foundation's Board of Directors.

Guidelines for the administration of internal operations were decided as was the relationship of the Board to the KMA House of Delegates.

It is anticipated that the coming Associational year, with the emergence of even more detailed identification of Foundation objectives and more intensified efforts with respect to particular activities, will require a substantially increased and welcomed degree of activity on the part of the Board of Directors. We would like to thank the KMA Board of Trustees for their fine cooperation and support throughout the first year and ask that they and the entire KMA membership continue this assistance.

Henry B. Asman, M.D., President

Claims and Utilization Review Committee

This has been an extremely active year for the Foundation's Claims and Utilization Review Committee and peer review activities. The main activities of the State Committee have been directed toward expansion of the review mechanism both with regard to the administration of the review process and the development of new areas of function, and have evolved away from care evaluation on an initial basis.

The Committee was fortunate in having the services of many of the members who participated last year. In addition, three new members were appointed to the Committee to fill vacancies left by retiring members. New members were Charles C. Rutledge, M.D., Hazard; Stephen Edelstein, M.D., Lexington; and Clegg Austin, M.D., Murray.

With the establishment of peer review committees in each of the 15 KMA Trustee Districts to review local claims, the role of the State Committee has changed to that of an appellate panel for use by parties who are not satisfied with decisions rendered by county medical society or Trustee District Peer Review Committees. In this first year of operation, the Trustee District Committees have functioned quite well as indicated by a centralized records-keeping and claims referral system maintained by the State Committee. All submitting carriers have made use of the District Committees and apparently find their adjudications quite objective and beneficial.

A number of new activities were undertaken by the State Committee upon transferral to the Foundation from KMA. The major goal being pursued is the compilation of a comprehensive system of norms for appropriate health facility utilization. The availability of such norms will allow all review groups to use the same criteria to determine the quality of care being rendered. To initiate such a program, it was necessary to carry out a great deal of research and evaluation of other utilization review programs already in successful operation. Information gained from these evaluations, together with ideas gained from discussions with various insurance and prepayment carriers, formed the nucleus of developmental plans which will be used in implementing the utilization review project.

It became immediately apparent that to gather data state-wide and to collate it into a form which could be readily put into use by care evaluation groups would require financial resources far exceeding those presently available. To this end, external funding sources were sought. After learning of Federal interest in review programs such as the one proposed by the Committee, correspondence was sent to a sub-agency of the Department of Health, Education and Welfare, enumerating the particular program aspects which were felt to be most beneficial and which would be employed in the project. Recently, however, the Board of Directors has determined that fulfillment of the review program objectives could be achieved using funding and data sources available within the state. It was decided on the basis of this opinion, that the seeking of federal funds should be postponed pending further evaluation of alternate funding methods.

During this Associational year, beginning in November, a newsletter has been published each month and is sent to the Trustee District Committees, the Regional Comprehensive Health Planning Councils, the AMA Council on Medical Service and others. The newsletter is intended as an informational vehicle which discusses items of national and state interest, and addresses itself to problems in the administration of the claims review process likely to be encountered by peer review committees.

Another major accomplishment of the State Committee has been the publication of a peer review brochure which describes the background and history of peer review in Kentucky and indicates future trends and objectives in the review field.

Informal meetings have been held with the Chairman and the Associate Dean of the Department of Continuing Education at the College of Medicine of the University of Kentucky concerning the implementation of remedial education programs for physi-

cians identified by the peer review mechanism as requiring additional training. At the request of the Board of Directors of the Foundation, both medical schools are being invited to participate on an active basis in planning and offering re-education programs. The educational and re-educational value of peer review is seen as probably one of the most beneficial implications of care evaluation. This aspect of peer review is suggested as a most innovative and important function and should be vigorously pursued.

Marvin A. Bowers, Jr., M.D., Chairman

Finance Committee

Allocation and budgeting of all organizational and operating Foundation monetary resources is the responsibility of the Finance Committee which will also coordinate and supervise the solicitation of finances. Because fiscal categorization has only recently been achieved with the Internal Revenue Service, the functions of this Committee have been necessarily restricted. Although no formal meetings were held, a number of guidelines for financial administration have been determined.

Application has and may be made for financial grants for specific developmental and demonstration projects but it is anticipated that operating funds will be obtained solely from regular and continuous private contributions and from revenue accrued from various services that the Foundation may provide to insurance carriers and health organizations. For the most part, individual committees will have primary administrative responsibility for grant project funds although the receipt and disbursement of such funds will be monitored by this Committee on behalf of the Foundation's Board of Directors.

In an attempt to determine the funding requirements of separate committees, the Finance Committee has requested proposed annual budgets for particular activities. When committee objectives are fully identified, fund allotment will be made on the basis of relative priority as determined by the Board of Directors and the total budget balance available for utilization. Peer review, which is a fundamental function of the Foundation, will most probably be self-financing, initially, by means of finance grants and eventually through reimbursement from health insurance carriers for review of claims.

The necessity of freedom of action for Foundation activities is imperative in view of the Foundation's socio-economic orientation. By definition, funding assistance from external sources implies some degree of functional restriction. The Finance Committee will strive to elicit financial aid, while avoiding to whatever extent possible, the normal sanctions usually associated with any form of assistance.

Marvin A. Bowers, Jr., M.D., Chairman

Health Care Delivery Committee

The Health Care Delivery Committee has been charged by the Board of Directors with the responsibility of studying proposed alternative methods to health care delivery, of offering cooperation and guidance to the developers of alternate delivery methods, and to make sure that the voice of organized medicine is heard so that the private practicing physician can maintain some control over his own destiny. At their initial meeting, the Committee members determined that because of the very broad nature of such responsibilities and the great potential impact of any evaluation along these lines, they should initially confine the scope of their activities beginning with a basic attempt at understanding of major suggested alternative delivery systems.

In order to be able to make any knowledgeable comment on various delivery methods, the Committee felt that it must first determine the mode of function of those systems already in active operation and some basic facets of a representative sample of various delivery methods, such as the actual delivery methods being employed, the various populations being treated with respect to size and economic level, a definitive understanding of restrictions applied, such as total enrollment capacities and excluded service, etc., and the costs of conducting such projects.

Even before the charge of the Board of Directors could be translated into pragmatic Committee objectives, the members felt that an initial outline for evaluation of active programs should be established which would constitute a basis of information for comment on the delivery sphere. A first criterion for program evaluation was determined to be the presence of external funding which of necessity must predate active operation. Knowledge not only of operational financial resources but the duration of funding periods was necessary because it was learned that although various projects might in fact be in operation from an administrative standpoint, they might not necessarily be capable of patient care in their varying developmental stages.

Because a major thrust of various alternate methods of health care delivery appears to be patient treatment from a non-confinement standpoint, the Committee felt that first evaluations should be restricted to a study of out-patient or ambulatory services. The relative effectiveness of various health care delivery programs should be indicated by a study of fundamental statistical facts. Basing evaluative parameters on the fact that alternate methods of health delivery are currently being widely pursued because of a feeling that preventive treatment is possible, that such treatment should be confined to a medically or financially indigent or specific population, and that care delivered in such a manner is more economically attractive than fee-for-service care, the following items were suggested as central points for examination of alternate methods: the number of patients treated, the number of patient visits per year, the total cost of conducting programs, the cost per patient for physicians' fees on an annual basis, and the total cost for physicians' fees during a yearly period.

With these thoughts formulated, the Committee began efforts to elicit this information from six representative health organizations in operation in the State, including two governmental medical programs.

From information obtained, the Committee members hope to be able to make a valid determination of the effectiveness of the various programs, as well as to develop an understanding of the present status of alternate health care delivery in the State.

By utilizing this and other data, the Committee will institute guidelines for observation and possible guidance and endorsement of new and emerging health systems on behalf of organized medicine and from the perspective of conventional treatment modalities.

Walter I. Hume, Jr., M.D., Chairman

Health Insurance Standards Committee

The Health Insurance Standards Committee of the Kentucky Foundation for Medical Care was appointed by Henry B. Asman, M.D., President of the Foundation, November 4, 1971. This Committee consisted of Richard F. Grise, M.D., Bowling Green, Chairman; Frank A. Bechtel, M.D., Louisville; Lewis Dickinson, M.D., Glasgow; C. Nicholas Kavanaugh, Jr., M.D., Lexington; and Garnett J. Sweeney, M.D., West Liberty.

The Committee was charged with the responsibility of assisting the Foundation to develop minimum standards of coverage for health insurance offered to the citizens of this Commonwealth and to use its influence to see that substandard coverage is upgraded or removed from the market.

This goal was set forth in Articles of Incorporation of the Foundation, the information so furnished to be publicized for the above noted purposes.

It has been noted in previous Foundation publications that a pluralistic approach to health care was desirable, but that some standardization would be necessary in order to assure that any provider of insurance would be primarily concerned with the provision of high quality health care for a reasonable price.

It was suggested that after a survey of various sources of information including minimum standards currently offered by carriers of insurance, that a model health insurance policy might be developed. It had been suggested that after the development of this model, its acceptability to the recipients of health insurance might be determined by consultation with certain lay groups. Subsequent intention would be to recommend to the State Legislature some statutory implementation of minimum insurance standards.

During current activities of the State Legislature, instructions were proposed to the Legislative Research Commission to look into the matter of health care insurance in Kentucky, this Commission in turn indicating that the responsibility for reviewing these matters would be passed to the Comprehensive Health Planning Council. A committee whose chairman is Peter P. Bosomworth, M.D., Vice-President of the Medical Center of the University of Kentucky, has been proposed, but the membership of this committee is not yet fully established. Apparently recent proposed and actual changes in the personnel of the Comprehensive Health Planning Council have delayed specific activity of the committee.

The Council, however, has charged this committee with the following tasks:

A. Study the existing effectiveness of health insurance, specifically the extent to which it covers health services for the people of Kentucky.

B. Identify problems which prevent effective third-party health insurance coverage and comprehensive health care to the people of Kentucky.
   (1) The committee is asked to be especially concerned about insurance coverage in the categories of ambulatory care, extended care, intermediate care, home care, preventive services, rehabilitative service and therapeutic services.
   (2) The committee is asked to inquire into ethical responsibility of insurance organizations, problems of efficiency and effectiveness in processing claims, false and deceptive advertising and management problems which prevent the insured from receiving equitable and effective coverage.

C. Document what is being done in Kentucky to control costs and develop appropriate recommendations.

D. Document the present role of Regional Health Planning Councils as to potential effectiveness of third-party payor health insurance programs. Make recommendations regarding the role of health planning councils in improving effectiveness of these programs if this seems appropriate and desirable.

E. Study and understand the activities of the State Department of Insurance and develop recommendations if appropriate and desirable.

F. Propose a package of long-range and immediate goals, objectives, standards and actions which could be advocated by the committee and Council as recommendations which the insurance industry and the government of the Commonwealth of Kentucky could consider to maximize benefits in a state-wide program of health insurance for Kentuckians.

Informal conversations with the representatives of commercial insurance carriers, of the Blue Cross-Blue Shield group and with the new Commissioner of Insurance have indicated a widespread interest and pledge of cooperation in working toward these principles of adequate health care coverage at a reasonable cost to the citizens of this Commonwealth.

General agreement seems to exist among the better known carriers along the following lines:

A. Professional payments would be restricted to duly licensed physicians and surgeons who are Doctors of Medicine or Doctors of Osteopathy, and to Doctors of Dentistry.

B. Subscribers and dependents should be eligible for the same benefits.

C. Where co-insurance exists, total payments should equal the customary fee scale.

D. Coverage for dependent children should start at birth.

E. Certain minimums of room and board rates and duration of coverage for disability in the hospital should reasonably reflect the cost of these items.

F. Out-patient and in-patient benefits for surgery and other services rendered should be sufficiently equal as to not encourage over-utilization of hospital facilities in order to gain improved benefits.

G. The concept of usual, customary and reasonable fees would normally be considered as a basis for the benefits from these policies.

In spite of the prolonged and variable discussions which have occurred within the State medical organization during these past several months, the desire of the majority of physicians in the Commonwealth as to adherence to usual and customary fees for their particular area of practice by insurance carriers is not clear. Clarification of the majority opinion of physicians practicing within this State must be made before guidelines for minimum standards for health insurance policies could be recommended. A single state-wide fee schedule is unacceptable to some physicians and insurance carriers and under present Federal stipulations, may be illegal, just as restriction of payments to local customary fees is unacceptable to other physicians and carriers. Designation of which standard should be employed in a model insurance plan should await further clarification by the House of Delegates of the Kentucky Medical Association.

In view of the continuing need for gathering information from several sources, the lack of clarification of the consensus of Kentucky physicians on the above noted fee plan, and in view of the concomitant charge to similar activity of a committee of the State Health Planning Council as charged by the Legislative Research Commission under instructions from the State Legislature, this Committee will continue to gather information until enough is accumulated to warrant more specific proposals to the Foundation.

Richard F. Grise, M.D., Chairman

Committee on Health Manpower and Placement Services

The Committee on Health Manpower and Placement Services continued with its regular activities during the past year. These included the review of several curricula for the preparation of newer types of health care personnel as well as the renewal of procedural endorsement for others.

Because of the new charges given the Committee when it was transferred to the Foundation, the Committee proceeded to meet with a number of officers and directors of selected allied health professional organizations within the State.

The Committee was seeking information on insight into the credentialing problems of our various allied health professions as viewed by their professional organizations. To date, the Committee has met with five representative groups and plans to meet with at least two more this fall.

The results of these conversations have been very informative to the Committee; and although no concerns of critical importance have emerged, one very obvious need did impress this Committee. There is a need for the Kentucky Medical Association to establish a much more effective and continuous liaison with the various allied organizations than has heretofore existed. These sentiments were echoed by the representatives of each of the groups with whom the Committee met.

The members of the Committee on Health Manpower and Placement Services suggest that consideration be given to the establishment of a joint liaison committee to include all of the interested health-related professional organizations whose major purpose would be to improve the communications which presently seem almost absent between and among these organizations.

Joseph Hamburg, M.D., Chairman

Special Ad Hoc Committee to Study Health Care Costs

As a result of a feeling of concern by the Executive Committee of the KMA Board of Trustees regarding the ever-increasing cost of health services and the capability of the private sector of the health community to control those costs, it was decided that a special ad hoc committee should be appointed. This Committee would be charged with the responsibility to recommend methods whereby the private sector of medicine and medically-related organizations could take immediate unified steps to resolve any real or imagined abuses of health care programs, to assure that the future of health care and its delivery be guided by those professionals and agencies who have expressed their undeniable ability to do so, and to suggest ways by which a most effective vehicle for resolution of this and related problems, peer and utilization review, might best be utilized to monitor care and control costs.

A steering committee, composed of John S. Harter, M.D., President of KMA; Henry B. Asman, M.D., President of the Foundation, and J. Ed McConnell, President of Kentucky Blue Cross and Blue Shield, met to appoint members to a Special Ad Hoc Committee to Study Health Care Costs. Members were selected on the basis of the interest and past efforts expressed by themselves and their respective organizations in maintaining the voluntary sector of health care and upgrading the quality of health care services delivered. In addition to the steering committee, the members chosen to serve were: Lee C. Hess, M.D., President-Elect of KMA; David A. Hull, M.D., Chairman of the KMA Board of Trustees; Marvin A. Bowers, Jr., M.D., Chairman of the Claims and Utilization Review Committee; Robert G. Cox, KMA Executive Director; Hasty W. Riddle, Executive Vice-President, Kentucky Hospital Association; Rufus O. Sadler, Chairman of the Kentucky Health Insurance Council; James C. Rogers, Director, Kentucky Medical Assistance Program, and Thomas Stroud, Director of Professional Relations, Kentucky Blue Cross and Blue Shield.

At the meeting of the Special Ad Hoc Committee, it was agreed that peer review had proven to be a great aid in helping to control costs in the area of physicians' fees but that the problem of excessive utilization of health services and facilities could not be alleviated until appropriate guidelines for effective in-hospital utilization review were available.

All members present related the beneficial value of peer review from the standpoint of their respective organizations but agreed that over-utilization of facilities and services affects the cost of health care to a greater degree than do physicians' fees when taken as a separate entity. This problem is self-sustaining in that increased misuse of services and facilities is ultimately realized by the patient in the form of higher dollar costs for health insurance premiums, increased hospital costs, etc. It was emphasized that the quality of care rendered was a major concern for this Committee's consideration as well as the important impact of cost.

Members agreed that methods should be developed to inform the general public and the physician population concerning the steps being taken through peer review to control costs and to monitor the quality of medical services being delivered.

Because of their common involvement in and concern with the health care of the citizens of Kentucky, the Committee members agreed that their unified action to evaluate the problems and needs of the health community in Kentucky and to develop and implement programs and procedures to resolve these problems and to fill these needs was mandatory and urgent. From the basis of mutual agreement that effective peer and utilization review was probably the most efficacious method by which a majority of the problems discussed could be resolved, the Committee members decided that using the outlines and care statistics being developed by the Foundation's Claims and Utilization Review Committee relative to the establishment of a comprehensive data accumulation and analysis program, this group should reconvene and decide on the best methods for implementing a confederated program with these guides as a focal point.

John S. Harter, M.D.
Henry B. Asman, M.D.
J. Ed McConnell

Ad Hoc Committee to Evaluate Psychiatric Charges of the Claims and Utilization Review Committee

The Ad Hoc Committee to Evaluate Psychiatric Charges was formed with the specific purpose of suggesting guidelines for payment to physicians rendering psychiatric in-patient care by insurance carriers and third party payers and to formulate standards for evaluation of psychiatric claims for use by the various peer review committees operating within the review mechanism. Prior to the appointment of this Committee, no cases had been submitted to either the State Claims and Utilization Review Committee or any of the component review committees involving psychiatric in-patient care which required adjudication. In recent months, however, a number of psychiatric claims were received for peer evaluation and the State Committee became aware that reimbursement schedules were difficult to establish because a number of different charging patterns were utilized by psychiatrists. In order to have all the various psychiatric philosophies represented in the development of any guidelines, the members of this Committee were chosen on a geographical, physician age group and treatment method basis.

Using the various charging patterns for psychiatric in-hospital care which had been offered by a third party payer as a basis for discussion, the Committee members agreed that it would be extremely difficult to stipulate, with objectivity, any time schedule fee reimbursement structure. This determination was predicated on the facts that, depending on the pathology being treated, the psychological makeup of different patients, etc., different physicians can accomplish varying degrees of progress in different amounts of time, and that complete freedom of choice of varying treatment methods by the physician was imperative if the free and private practice of medicine was to be maintained.

It was unanimously agreed by the Committee members that the method of charging employed by psychiatrists for in-patient treatment, whether on an hourly, daily, weekly or individually itemized basis should be left to the option of the individual psychiatrist. However, regardless of the charging method used, the total fee should fall within the guidelines of the usual, customary and reasonable concept.

The following recommendations of this Committee with regard to billing structures are, therefore, that individual charging patterns by psychiatrists be recognized and allowed by all carriers on the basis of the usual, customary and reasonable concept and that these charges be allowed on a consistent state-wide basis rather than on specific actuarial areas.

I would like to express my appreciation to each of the Committee members who gave of their time and efforts to participate on this Committee.

Harvey R. St. Clair, M.D., Chairman

Recommendations, Reference Committee No. 4

The Report of the Kentucky Foundation for Medical Care, Inc. was reviewed and accepted by the committee.

Mr. Chairman, I move the acceptance of this section of the report.

(Motion was seconded and carried.)

Report of the Board of Directors Kentucky Physicians Mutual

The past 12 months have been very challenging to not only health care providers but Blue Shield as well. Criticism, public concern, press coverage and general questioning of the health care system, especially the cost and its constant increase, and of voluntary prepayment organizations, continues to be priority topics. In the face of continued adversity, it is a pleasure for me, as Chairman of the Board of Kentucky Physicians Mutual, Inc., to present a report with positive accomplishments.

Membership with Kentucky Blue Shield is now in excess of 1,170,000, a net enrollment gain of 5.01% in the last 12 months. There are over 622,544 members carrying additional benefits, through Major

Medical and Extended Benefits, to help pay for long-term catastrophic illness, in addition to basic protection. In the same period, over 1,151 additional companies voluntarily enrolled their employees and dependents in Blue Shield, making a total of 13,881 member companies. Over 65,578 people 65 years of age and over are protected by the Blue Cross and Blue Shield-65 Program to help fill the voids in Medicare. In the last 12 months, Blue Shield has paid in excess of $22,414,000 for services to members, an increase of $3-3/4 million over our last report. This brings the total payment to doctors for services rendered our members since the organization of Blue Shield to over $165,770,000.

Our Kentucky Blue Shield Plan is sound financially and has reserves of $11.52 per member. We continue to operate with one of the lowest overhead costs per member of the 70 Blue Shield Plans in America.

The administration of our Usual, Customary and Reasonable Program continues to work effectively with over 200,000 members covered through programs administered on this basis. Currently, 2,155 Kentucky physicians have signed a Participating Agreement for the program and the number continues to rise each month. It is important to note that 56 counties have 100% representation; 64 counties are represented by more than 90% participation; and 90 counties have 75% or more physicians participating. Only eight counties with ten or more physicians have less than 70% participation. During the period from January 1, 1971 through December 31, 1971, 127,495 Usual and Customary claims were processed, representing a total payment of $6,654,686 for covered services under the program. In the first six months of 1972, 88,535 Usual and Customary claims were processed for a total payment of $4,513,317 for members' services.

The Board of Directors and staff highly commend the work and dedication of local review committees and the Kentucky Medical Association Claims and Utilization Review Committee. In 1971, only 219 cases were referred to a committee and this case figure represented .171% or less than two-tenths of 1%, of the total claims processed. During the first quarter of 1972, 66 cases were referred to a review committee, representing .168%, still less than two-tenths of 1%.

The Usual, Customary and Reasonable Program continues to work and help Kentuckians voluntarily prepay the cost of necessary professional care.

The past 18 months have also seen growth in the Blue Shield Prescription Drug Program. During 1971 and the first six months of 1972, there were 165,596 Drug Program claims processed representing a total payment of $487,576 for members under this program. Over 70% of the pharmacists in Kentucky have signed agreements to participate in the program.

Recognizing that there can be duplication of services that increase the cost of helping Kentuckians finance the cost of health care, and also recognizing the need and demands for comprehensive dental benefits, Kentucky Physicians Mutual, Inc., in cooperation with Kentucky Blue Cross and the Delta Dental Plan, began marketing a prepaid dental program in March of 1972. The program is designed to provide preventive dentistry and is being offered to groups of 50 or more eligible employees.

In February of this year, the Board of Trustees of Kentucky Physicians Mutual, Inc., in cooperation with Kentucky Blue Cross, reaffirmed our position for experimentation in alternate methods and established a more positive role in the development of these programs throughout Kentucky. This new position provides the flexibility to work within the framework of several approaches and options including such developments as Foundations for Medical Care, both at the State and Society level; the capability to administer, operate and implement prepaid group practices and health maintenance organizations; and providing certain services through contractual arrangements where feasible. Our objective is to guide these developments to a self-supporting basis so as not to increase the cost of care by duplication of services, and to try to bring more and better care to the people of Kentucky at the lowest possible cost.

On July 1, 1972, the Kentucky Utilization Program, (KUP), a modern medical information gathering and reporting system for hospitals and other health care facilities, was offered to all Kentucky hospitals. KUP, with input from participating hospitals, will provide a means for the collection and reporting of data on all discharged patients. This program, endorsed by both the Kentucky Medical Association and the Kentucky Hospital Association, has already been implemented by seven hospitals. We are very enthusiastic about the program, the services it can provide to Kentucky hospitals and doctors and the long term effect it is anticipated to have on utilization of hospital beds and services.

The Consumer Advisory Committee to Blue Cross and Blue Shield continues to express concern over health care cost, the constant increase and delivery of care. The Committee is concerned with expanding benefits such as outpatient services, home health and nursing home services.

Companies and unions are now bargaining tougher over health care benefits than ever before. Employees are meeting increasing resistance from employers concerning payment for health programs. Business organizations such as the U. S. Chamber of Commerce as well as insurance commissioners, congressional and legislative committees, labor and consumer organizations are now taking critical looks at the total health care picture.

The Kentucky Medical Association started Blue Shield in Kentucky for the people, to help solve a socio-economic problem, to help people voluntarily budget for health care and to be in a better position to meet their financial responsibility to their doctors. There were other objectives, also; to try to help prevent the socialization of medicine and further government encroachment and to strengthen the voluntary free enterprise system. This is a never-ending fight and today we are still very much in the forefront. The furore over Medicare, Medicaid, the cost

of care, the accessibility of care, has increased the momentum in Congress to establish a compulsory federal health program. We think strong, successful, voluntary prepayment organizations such as Kentucky Blue Shield are one of the first lines of defense against complete compulsory government health schemes.

We need the understanding and support of the doctors of Kentucky as well as that of business, industry, labor and the general public in our efforts. These are very crucial times. It is vital that Blue Shield work to the satisfaction of members and the public at large as well as to the doctors of Kentucky.

Recognizing the changing times in the current situation in health care and prepayment organizations, I am pleased to advise you that the Blue Shield Board of Directors has modified its Bylaws to establish an age limit of 68 years for directors, and to work by attrition toward a professional-public balance of 50% professional (Doctors of Medicine) and 50% consumers. This change was also recommended to the Blue Shield Board by the Executive Committee of KMA.

Our voluntary system for prepayment is strong; it is vital; it is growing. We have many dedicated people in and out of medicine who give of their time to make it work. We are extremely grateful to all of them. We know our objectives and what we are doing are in the best interest of the people, the medical profession and our voluntary system. We wish to extend to the members of the entire medical profession of Kentucky and to the staff of the Kentucky Medical Association our sincere thanks for their cooperation and contribution in helping make this another successful year.

Wyatt Norvell, M.D., Chairman

Recommendations, Reference Committee No. 4

The Report of the Board of Directors of the Kentucky Physicians Mutual, Inc. was reviewed and approved by the committee.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Advisory Committee to Blue Shield

The KMA Advisory Committee to Blue Shield met this year on May 24. This Committee has the responsibility of making recommendations through the KMA Board of Trustees to the Blue Shield Board of Directors on all matters of mutual interest. In addition, the Committee is charged to promote the improvement and extension of coverage offered to the public by Blue Shield and to study the problems affecting the public in the field of voluntary prepayment for health care and make recommendations to help solve such problems.

The 1971 Report to the House of Delegates was reviewed. In adopting that report, the House of Delegates established a policy calling for physicians to have more information as to the charges by hospitals for various services ordered by physicians. The Chairman reported that this matter was referred to the Hospital Committee and your Chairman and members of the Kentucky Hospital Association met with the KMA Hospital Committee to consider the matter. It was explained that the Kentucky Hospital Association has asked each member hospital to make this information available to their respective medical staffs. In addition, medical staffs are being asked to appoint a committee to keep staff members apprised of certain hospital costs as it is felt that knowledge of these charges would affect a physician's decision when ordering various services for his patient.

We were pleased to have several members of the Blue Shield staff in attendance who submitted several informative reports. The following summary of these reports indicate the activity and progressive leadership provided by Blue Shield in Kentucky.

Enrollment: Staff advised that even with the impact of the President's Economic Stabilization Order, the past year had been a very successful enrollment period for Kentucky Blue Shield. The total membership in Blue Shield as of April 30, 1972, was 1,163,031, of which 258,197 carry additional benefits through the Extended Benefits Contract and 337,347 through the Major Medical Contract. It is important to point out that over 650,000 members have certificates that provide some level of outpatient diagnostic, x-ray and laboratory benefits.

Professional Relations: During 1971, the Professional Relations staff contacted over 4,600 physicians' offices, personally visiting with the physicians on over 1,878 of these calls. In addition, staff made 1,899 hospital calls, 469 calls on ECFs and nursing homes, 93 calls to home health agencies and 633 calls on pharmacies. To further their communications link with physicians, they contacted the chief of staff at every hospital in the State, conducted seven hospital lounge visits and presented formal programs to 27 medical staffs.

UCR Program: Reports indicate that the UCR Program continues to be very successful. For the year 1971, there were 127,495 claims processed under the program totaling some $6,600,000.00. It was necessary to refer 219 cases to peer review which represented two-tenths of one per cent of the volume processed. Physician participation in the program continues to increase. In 69 counties participation exceeds 85%. The overall state-wide participation is 78% representing 2,119 participating physicians.

Sixteen per cent of the members covered by Blue Shield now have programs administered on a Usual, Customary and Reasonable basis.

New Benefits: The Committee was advised the Blue Shield staff has been developing and are finalizing plans to market a new $500 surgical schedule. The staff also advised that they are receiving an increasing number of requests for programs that provide for a percentage of usual, customary and reasonable.

Both the $500 surgical schedule and the percentage of UCR provide another level of benefits to be offered in the marketplace and will give people the

opportunity to upgrade their current level of indemnity programs without purchasing a full UCR.

The staff advised that the agreement between Blue Cross and Blue Shield and Delta Dental has been completed and the program is now being implemented.

Reciprocity: It was reported that the National Association of Blue Shield Plans is working towards a national claims processing system to simplify the processing of out-of-state Blue Shield claims. Under this new program, the attending physician files a claim with his own Blue Shield plan, even though the patient is a member of another Blue Shield plan. Currently only certain members are eligible for the program and they are identified by a special identification card. It is hoped that this system will eventually be expanded to cover all Blue Shield subscribers.

Kentucky Utilization Program: At our 1971 meeting of this Committee, considerable discussion was devoted to a data gathering system to be known as the Kentucky Utilization Program. An Ad Hoc Committee was appointed to further study the Program pursuant of a recommendation to the Board of Trustees for KMA approval.

This year, reports were received advising that the Program was begun on June 1 on an experimental basis with only five hospitals and effective July 1, the Program will be offered to all Kentucky hospitals.

Alternate Methods: Again this year, considerable amount of time was devoted to discussion of alternate methods of health care delivery. The Committee was advised of activities going on in various sections of the State.

Last year, the House of Delegates asked Blue Shield to qualify as an HMO with the belief that Kentucky Blue Shield could be the stabilizing factor in the various experimental health care delivery systems now being conceived. The Committee reemphasized the role Blue Shield can and should play in these developments but also pointed out their recognition that physicians of Kentucky are not unanimously in favor of the HMO concept and that great concern should be exercised in encouraging the expansion of these experimental programs.

The newly implemented concept of pre-admission testing, as instituted by Blue Cross last year, was reviewed. It was pointed out that the Program is not being used to any great extent. The Program is designed to shorten the patient's in-hospital days by having in-hospital tests available upon admission. PAT results are now accepted only if done in a hospital. The Committee felt that additional patient dollars would be saved if the hospital medical staff would accept tests done outside the hospital providing these laboratories meet certain requirements. As a result, our Committee has asked the KMA Board of Trustees to recommend to the Blue Shield Board of Directors that Blue Cross pay for pre-admission lab and x-ray workups that are acceptable providing the laboratory and x-ray departments meet minimum requirements for proficiency testing programs conducted by the American College of Physicians and the American College of Pathologists.

The Committee carefully reviewed the numerous meetings held this past year as a result of a resolution offered last year by the Nelson County Medical Society and passed by the House of Delegates in regard to the Usual, Customary and Reasonable benefit program. There has been some question as to the interpretation of that resolution and whether or not the implications of it were completely understood by the members of the House of Delegates. After considerable discussion, the Advisory Committee to Blue Shield voted unanimously to reaffirm our support of the Usual, Customary and Reasonable concept as currently implemented by Kentucky Physicians Mutual as authorized by this House of Delegates in 1968, and subsequently reconsidered each year thereafter.

This Committee, in its role of maintaining a friendly and close liaison with Blue Shield, hopes to continue to reflect the policies of this Association and to provide assistance in the upgrading of Blue Shield coverage for our citizens.

Consideration was given to the proposal for combining the KMA Advisory Committee to Blue Shield into a joint Committee with the KMA Advisory Committee to Blue Cross. The Committee determined to recommend to the Board of Trustees that consideration be given to this effort providing it meets with the activities assigned by the Advisory Committee to Blue Cross.

This Committee, in its role of maintaining a friendly and close liaison with Blue Shield, hopes to continue to reflect the policies of this Association and to provide assistance in the upgrading of Blue Shield coverage for our citizens.

Kenneth Crawford. M.D., Chairman

Recommendations, Reference Committee No. 4

The Report of the Advisory Committee to Blue Shield was reviewed and approved with the comment that the Board of Trustees work with the Advisory Committee to Blue Shield to make the pre-admission testing program more functional.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Report of the Advisory Committee to Blue Cross

Over the years, the KMA Advisory Committee to Blue Cross has served dual purposes. The Committee serves in an advisory capacity to Blue Cross and functions as a review mechanism to which Blue Cross cases can be referred for consideration.

The full Committee met on June 1, 1972, and reviewed reports on Blue Cross Enrollment, Professional Relations, Claims and a summary of actions on claims submitted to the Review Committee. Other agenda items included discussions of the booklet on certificate exclusions and limitations, Blue Cross' position on Comprehensive Health Planning, proposed National Health Insurance programs and Alternate Methods of Delivery of Health Care, Co-

ordination of Benefits, Kentucky Utilization Program, Blue Cross benefits and exclusions and the reorganization and structure of the Committee.

At the 1971 full Committee meeting, a request was made that Blue Cross update the booklet, "A Guide to Blue Cross Limitations and Exclusions," which was developed by the Advisory Committee of 1966, and present the revised edition to the Committee for consideration. After reviewing the new edition, the Committee has recommended that it be published and mailed to all physicians in Kentucky. The pamphlet is designed to provide physicians, medical assistants, hospital and extended care facility personnel with the major limitations and exclusions in the Kentucky Blue Cross Hospital Plan, Inc., certificates, riders and endorsements.

Blue Cross staff reported that acting on a recommendation of the Advisory Committee to Blue Shield, and the endorsement of KMA and the Kentucky Hospital Association, Blue Cross has implemented a health data gathering system for Kentucky hospitals and physicians. The program, known as the Kentucky Utilization Program, or KUP, is now being offered to every Kentucky hospital beginning July 1, 1972. Staff reported they are very enthusiastic about the program, the services it will provide and the long term effect it could have on the utilization of hospital beds and services.

The Committee reviewed the activities of the review function during the past year. It was reported that the subcommittee met on four separate occasions and reviewed a total of 97 cases, amounting to 3,338 hospital days. Of this amount, 1,311 days were paid and 1,657 hospital days were disallowed. It is interesting to note that during the same period in the previous year, the Committee reviewed only 35 cases.

Over the years, the Committee has devoted a considerable amount of its effort to reviewing Blue Cross cases. Since the development of the Kentucky Foundation for Medical Care Claims and Utilization Review structure, which is now inclusive of trustee districts review committees plus the State review committee, there has been considerable discussion concerning the possibility of transferring this particular function. It was the Committee's collective opinion to recommend to the KMA House of Delegates that the review mechanism of this Committee be transferred to the Foundation's Claims and Utilization Review Committee at the end of the Associational year.

With the review mechanism of the Advisory Committee to Blue Shield already transferred, the Committee also recommends the House of Delegates consider reorganizing the structure of the Advisory Committees to Blue Cross and Blue Shield into one combined committee. It is the feeling of the Committee that possibly one committee serving the dual capacity could be more efficient.

As Chairman, I would like to personally commend the members of this Committee for giving so freely of their time and effort, and I would also like to thank James R. Schrand, M.D., for filling in for me and chairing the June 1 meeting.

Esten S. Kimbel, M.D., Chairman

Recommendations, Reference Committee No. 4

The Report of the Advisory Committee to Blue Cross was reviewed and approved.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Community and Rural Health

The Committee on Community and Rural Health held its single meeting this year on February 10, 1972. The Committee's duties are varied and include the various aspects of public and rural health, mental health, TB and TB control, highway safety and drug abuse.

The Committee again formulated plans for Community Health Week in Kentucky during the first week of May. The focus of this year's promotion was on alcoholism and a coordinated effort was made with the Kentucky Department of Mental Health to inform Kentucky physicians of the various programs now in effect in the Commonwealth. We wish to express our appreciation for the cooperation of the membership in this program.

In addition, we received assistance from several allied organizations, for which we are grateful. Plans are for future recognitions of Community Health Week to emphasize local medical progress, available health services and facilities, and the individual and cooperative roles played by members of the community health team.

In the area of rural health, the Committee continues its interest in Home Health Care Programs and is hopeful that the membership of KMA becomes familiar with them. The Committee feels that this program is one of the best examples of the efficient and affirmative utilization of allied health personnel which extends the treatment capability of the physician into the home.

Your Chairman had the pleasure of representing KMA at the AMA National Conference on Rural Health in San Francisco this past March. Several new concepts in the delivery of health care in rural settings were discussed, including national developments in the field of health education.

Highway safety is of major interest to the Committee. We heard a summary on a conference sponsored by the AMA and the American Association of Motor Vehicle Administrators on the primary conditions faced by the physician in evaluating patients for motor vehicle operators' licenses. We were pleased to learn that Kentucky's efforts in this area are superior to many other states. We continue to publicize the KMA Automotive Safety Award and the KMA General Safety Award and we encourage the membership to advise us of groups which might qualify for them.

As Chairman, I would like to extend appreciation

to the members of the Committee for their continuing interest and participation.

John M. Baird, M.D., Chairman

Recommendations, Reference Committee No. 4

The Report of the Committee on Community and Rural Health was reviewed and approved. Investigation by the reference committee showed that last year's recommendation of dealing with the problem of alcohol and highway safety has been partially implemented and we recommend that it be emphasized more this year.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Health Care of the Poor

The AMA House of Delegates, at its 1971 Annual Meeting, adopted a resolution that state and local medical societies be urged to appoint a committee on health care of the poor.

The Kentucky Medical Association, at its 1971 Annual Meeting, established this Committee. Since I had served as the first Chairman of the AMA Committee on Health Care of the Poor, I was given the honor of serving as Chairman of this Committee.

The Committee has adopted as its purpose, "to study the problems of health care of the poor, particularly in the central-city poverty areas and the rural areas of the Commonwealth, and to recommend appropriate actions to the KMA Board of Trustees." The Committee "shall also maintain liaison with the AMA Committee on Health Care of the Poor and follow the progress made by similar committees in other states."

On November 12 and 13, 1971, it was my pleasure to attend a meeting of the AMA Committee on Health Care of the Poor held in Cleveland, Ohio, at which time it was determined that the AMA's main thrust was to better inform patients on the need for proper health care and to provide medical societies with resource material.

The KMA Committee on Health Care of the Poor held scheduled meetings on January 27, 1972, and April 20, 1972. As a part of our study of health care in rural areas, on April 1, the Chairman, Committee member Bush Hunter, M.D., and a KMA staff member visited the Campton Clinic and had a two-hour meeting with Paul Maddox, M.D., a member of the Committee, who has been in practice in his community for 19 years. Doctor Maddox provides a most valuable medical service to his area, seeing approximately 150 patients daily. In his clinic he has a well-trained staff of 13 providing a 24-hour, seven-day-a-week service. He has six examining rooms, an x-ray unit and a laboratory, and only about two per cent of his patients need to be referred to the University of Kentucky Medical Center for treatment of complicated illnesses. Wolfe is a very poor county with a majority of the patients either on welfare or unable to pay.

The Committee members also requested and received a report from Loman Trover, M.D., Clinical Director of the Trover Clinic in Madisonville, which is one of the largest clinics operating under a free enterprise system in the rural areas of the United States. There are approximately 50 physicians serving in various specialties located in a city of approximately 13,000 people. The clinic has made it a rule to see and care for anyone who presents himself for service. The patients are of all economic levels, including a number on governmental medical programs and a certain number who are not able to pay for their care. Doctor Trover points out that one of the attributes of a sizable group practice is that indigent care is shared by many physicians and, therefore, does not affect anyone so greatly. His feeling is "that the poor—as nearly as possible—must be afforded good medical care, and that the payment for this care should come increasingly from programs set up to pay for such care. The responsibility for giving this care, however, must still remain with the physician."

Our study of health care of the poor in the metropolitan areas included reports on the Hunter Foundation for Health Care, Inc., the Park-Duvalle Neighborhood Health Center, and the Greater Louisville Organization for Health, Inc.

A report on the Hunter Foundation for Health Care, Inc., indicated that its primary objective was disease detection and prevention of unnecessary hospitalization. The Hunter Foundation hopes to begin services in November serving approximately 5,000 people the first year, 10,000 the second, with a 30,000 goal after five years. The Hunter Foundation will be a health maintenance organization operating through a pre-paid insurance plan with payments scaled to the earnings of the patients.

The Park-Duvalle Neighborhood Health Center was initially funded by OEO, but has recently been transferred to the Department of Health, Education and Welfare. The Center is currently enrolling people in the neighborhood in a pre-paid insurance plan, but it was reported that progress was slow. It was noted that a contract was recently negotiated with the St. Joseph Infirmary for patients covered by either government medical programs or private insurance policies with the people unable to pay still being referred to General Hospital.

The Greater Louisville Organization for Health, Inc., was organized by medical students, under the supervision of a volunteer physician, for preventive health care screening and health education. This operation is in the Portland area of Louisville and was chosen because of the high rate of infection among the people, the bad housing conditions, and the low income. The people in the Portland area have been most cooperative in providing a clinic and providing a Board of Advisors to work with the students. The clinic now operates two nights per week.

To provide greater coverage, an application has recently been made under the Emergency Health Personnel Act of 1971 for health care personnel to

be provided by the National Health Service Corps. This application has been approved by the Jefferson County Medical Society and the Kentucky Medical Association.

In addition to these studies all Committee members have been provided with resource material that had been obtained from AMA and other sources. While there are now 20 state associations and 27 county societies having formed health care of the poor committees, it was determined that practically all these groups are still in the formative stage.

It was the Committee's suggestion that perhaps a pilot project be organized possibly seeking funds by a Federal grant through the Kentucky Foundation for Medical Care, Inc., or other sources, such as State Comprehensive Health Planning, to study the opportunities in Kentucky for a regional multi-county, mini-clinic to serve a rural area of Kentucky. The study should include such things as transportation, shopping facilities, physicians already in practice, educational facilities and other assets that would draw physicians to a rural area. Utilization of the services of the Rural Kentucky Medical Scholarship Fund and the Kentucky Public Health Service were mentioned as possibilities.

Planning for health service will need to be on an area basis with multiple communities in a logical service area planning together to develop health care systems and to attract appropriate health manpower working in a group to provide home, clinic and hospital care.

Robert C. Long, M.D., Chairman

Recommendations, Reference Committee No. 4

The Report of the Committee on Health Care of the Poor was discussed and approved. The reference committee recommends that during the upcoming year they not only apply for the planning grant but establish a clinic in a needy area of Kentucky.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded.)

At this time, Doctor Hull, Chairman of the Board of Trustees, presented a recommendation from the Board that the report of the reference committee as relates to the Committee on Health Care of the Poor be rejected, requesting that the committee report itself be accepted as such and further requesting that the Foundation consider the action suggested in the committee report.

(Motion was seconded and carried.)

Report of the Committee on School Health, Physical Education and Medical Aspects of Sports

The Committee on School Health, Physical Education and Medical Aspects of Sports held two meetings during the Associational year. These meetings were held on December 8, 1971 and January 23, 1972, at which time programs were discussed as to ways of improving the medical care administered to athletes in the state of Kentucky.

During the year this Committee, along with Eastern Kentucky University and the Kentucky High School Athletic Association, co-sponsored a "Medical Aspects of Sports Seminar" at Eastern Kentucky University. A number of nationally-known team physicians spoke at the one-day seminar which was well attended by physicians, coaches and trainers throughout the State. It is the hope of this Committee to be able to present this type of program on a yearly basis in the future and possibly expand it to a two-day affair. Most of the Committee attended this meeting.

In an effort to make the medical student more aware of the need of good medical treatment of the athlete, the School Health Committee was instrumental in having an elective course added to the curriculum at both the University of Louisville and University of Kentucky medical schools entitled "Medical Treatment of the Athlete." This course will be available to all junior and senior medical students beginning with the fall semester.

Once again, efforts were made to strengthen the liaison between high school coaches and physicians in the State. As your Chairman, I had the opportunity to meet with both the Commissioner of the Kentucky High School Athletic Association and the Superintendent of Public Instruction and to discuss the various problems which had kept the Committee from achieving many of its aims in the past. Especially significant were the discussions on how to retrieve rapport at the local level between physicians and school administrators, so as to secure a physician present (or at least on call) at each football game. Lyman Ginger, Ed.D. and the new Commissioner of the Kentucky High School Athletic Association, Joe Billy Mansfield, pledged renewed efforts toward our mutual aims and made many suggestions to be incorporated in future plans of the Committee.

As a means of making team physicians and football coaches more aware of the dangers of heat illness, the Committee was responsible for having an article entitled "Heat Illness in Early Season Football" published in the *KMA Journal* and the Kentucky High School Athletic Association Journal. In addition, as Chairman of the School Health Committee, I had the opportunity to speak at the Annual Football Coaches Clinic at the University of Kentucky on August 4.

The Committee plans to publish other articles throughout the year in these publications with the hope that these articles will help keep team physicians and trainers up-to-date with the latest methods of handling athletic injuries. The Committee also plans to submit to the Commissioner of the Kentucky High School Athletic Association standardized physical examination forms to be used in administering all pre-season histories and physical examinations given to high school athletes.

This Committee will continue to make every effort to promote education in athletic medicine in both the professional and lay communities and will continue to

serve as liaison to physicians, coaches, trainers and other interested in sports medicine throughout Kentucky.

Robert N. McLeod, Jr., M.D., Chairman

Recommendations, Reference Committee No. 4

The Report of the Committee on School Health, Physical Education and Medical Aspects of Sports was reviewed and approved. We wish to commend this committee on their excellent work during the past year and encourage them to continue in this manner.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Public Relations

This is the first full year of existence for the Public Relations Committee and the Committee has spent a great deal of time getting organized and exploring areas where it might be of most service. During the initial phases of this, KMA staff was most helpful in finding out what other associations were accomplishing and in giving some guidelines as to the directions we might go.

Subsequent to meetings between staff and myself, the Committee has met on two occasions and has begun activity in several areas. Two items referred by the Board of Trustees for recommendations have been acted upon and implemented; these are the matter of automobile decals for KMA members which are already in the hands of the members. The second matter had to do with establishing a KMA booth at the Kentucky State Fair; this has been implemented and we hope will be a success.

With considerable assistance of Ted Tighe, our public relations consultant, a number of other ongoing projects have been started including prospects for in-service education and training for physician's office personnel, better public relations for Peer Review, the Rural Scholarship Fund, and periodic releases having to do with items of public interest on behalf of the Kentucky Medical Association. Other newer and somewhat exploratory matters have been discussed and will continue to be evaluated and recommendations submitted to the Board.

Perhaps equally important, a number of items of public relations import have been explored by the Committee and felt not worth the cost involved or benefits to be accrued therefrom. While these things can only be reported as negative results, they nonetheless represent considerable activity by the Committee and time and money saved the Association.

Walter R. Brewer, M.D., Chairman

Recommendations, Reference Committee No. 4

The Report of the Committee on Public Relations was reviewed and accepted. There was much discussion in regard to the function of this committee. It was felt by our reference committee that, like all new committees, it is having some difficulty in getting its programs implemented. We recommend that during the coming year that this committee devote more of its time to promoting the merits of the free enterprise of medicine to the public.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Report of the Chairman, Board of Trustees, Ad Hoc Committee on Electronic Data Processing

The Ad Hoc Committee on Electronic Data Processing was appointed in 1970 by the Board of Trustees for the purpose of studying the feasibility of KMA utilizing computers to bill all KMA members directly from the Headquarters Office. For the past two years this special committee has studied proposals submitted to them by a number of organizations, including Fisher-Stevens, Inc., of New Jersey, to review the computer billing systems. The Committee felt that the Fisher-Stevens system fulfilled the needs of KMA, and therefore, recommended to the Board the adoption of this program. The Board approved the report and subsequently, it was decided that KMA would begin state-wide billing in late 1973 for 1974 dues.

Recommendations, Reference Committee No. 4

The Report of the Chairman, Board of Trustees, relating to the Ad Hoc Committee on Electronic Data Processing only was reviewed and adopted by the committee.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Resolution A

KMA Board of Trustees

RESOLVED, that, in contracts where benefits include physicians' fees, the KMA make it unequivocally clear that management, labor and third party carriers shall consult with duly constituted representatives of organized medicine before determining "usual, customary and reasonable" fees, and be it further

RESOLVED, that wherever peer review mechanisms exist, it is essential that third parties make use of them as a primary method of resolving differences prior to threats of litigation; and, in turn, that peer review mechanisms be utilized when dispute exists between patients, physicians and third parties referable to the quality of medical care rendered, professional fees or the medical necessity for hospitalization, and correspondingly that the medical profession continue to actively support the development of peer review mechanisms where they do not exist, and be it further

RESOLVED, that the medical profession will not condone or tolerate action on the part of any third

party that would encourage or promulgate litigation in the settlement of any such dispute, and be it further

RESOLVED, that all medical insurance carriers and health plans be informed of this policy, and be it further

RESOLVED, that the KMA remind physicians that they have the right to enter into prior agreement with patients regarding the fee for services to be rendered.

Recommendations, Reference Committee No. 4

Resolution A—Utilization of Peer Review Mechanisms introduced by the KMA Board of Trustees was discussed by the committee with the recommendation that it be approved.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Resolution B

KMA Board of Trustees

WHEREAS, the physicians of Kentucky, as well as all other citizens of the Commonwealth, are concerned with the constantly escalating costs of health care, and

WHEREAS, it has been statistically proven that hospital costs are the principal factor in the overall cost of health care, and

WHEREAS, the attending physician is concerned with rising hospital costs and recognizes that he admits the patient to the hospital, orders the utilization of laboratory, x-ray and other facilities, and prescribes the medications and services necessary for the diagnosis and treatment of his patient which constitutes a part of this cost, and

WHEREAS, the physician, in most instances, has no knowledge of the charges made to his patients by the hospital for the various ancillary facilities and services it provides, or for the medications dispensed, now therefore be it.

RESOLVED, that the Kentucky Medical Association request and urge all hospitals in the Commonwealth of Kentucky to make available to each physician on its staff at least monthly a photocopy of the itemized bill of one of the patients whom he had discharged so that he could become more aware of the cost of the services he prescribed, and be it further

RESOLVED, that a copy of this resolution be sent to the president of the staff of each hospital in the Commonwealth with the request that it be presented to the staff for affirmative action in support of the resolution and encouragement to the hospital administration toward its implementation, and be it further

RESOLVED, that a copy of this resolution be sent to the Kentucky Hospital Association with a request that that organization use its influence with its member hospitals to assure implementation of this resolution.

Recommendations, Reference Committee No. 4

Resolution B — Cost of Hospital Care was introduced by the KMA Board of Trustees. After discussion, it was the committee's feeling that this resolution should be adopted.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Resolution E

Fayette County Medical Society

WHEREAS, the general practice among insurance companies is to offer remuneration to a physician serving an applicant for insurance coverage by that company for the search of his records and reporting of the previous medical history; and

WHEREAS, Blue Cross-Blue Shield make a practice of writing their applicants requesting that the applicant contact his physician concerning the report of past medical history in support of his application for coverage with no mention or offer of remuneration, be it therefore

RESOLVED that the Board of Trustees of the Kentucky Medical Association through its liaison with the Board of Trustees of Blue Cross-Blue Shield urge the companies to develop a standard procedure similar to that employed by commercial insurance carriers through which the past medical history of an applicant may be obtained from his physician and that the physician be proffered appropriate remuneration by the insurance company for rendering this service.

Recommendations, Reference Committee No. 4

Resolution E — Remuneration for Insurance Reports was introduced by the Fayette County Medical Society. A lengthy discussion was carried out in regard to this resolution. It was the feeling of the committee that the present reports of Blue Cross-Blue Shield are not time consuming and that as long as these reports remain simple, the committee recommends that this resolution be rejected. The committee also recommends that Blue Cross-Blue Shield inform their subscribers that it is their financial responsibility to pay for these reports should the physician make a charge.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Resolution I

Madison County Medical Society

WHEREAS, the American Medical Association and the Kentucky Medical Association has long recognized the importance of proper health supervision in providing athletics for participants and the relationship of such supervision to the promotion of the art and science of medicine and the betterment of public health is clearly evident, and

WHEREAS, in 1967, the AMA House of Delegates recognized the fine rapport developed between the Committee on the Medical Aspects of Organized Athletics and the National Athletic Trainers Association (NATA), they lauded the development of professional standards by the NATA and they further recommended that all athletic teams have the benefit of a professionally prepared athletic trainer as a part of the medical supervisory team. The AMA House of Delegates specifically approved the following recommendations that:

(1) The AMA recognized the importance of the role of the professionally prepared athletic trainer as a part of the team responsible for the health care of the athlete; and

(2) The NATA be commended for its efforts to upgrade professional standards, since improved preparation and continuing education enable athletic trainers to work effectively with physicians in the health supervision of sports; and

(3) State and local medical societies and physicians individually be encouraged to help advance the professional goals of the NATA in their communities through appropriate liaison activities; and

WHEREAS, in 1969, the House of Delegates of the AMA urged the creation of athletic medical units in all schools having sports programs and that such units have athletic trainers or athletic health coordinators, and

WHEREAS, the NATA has just formulated an outstanding set of procedures for certification based on educational preparation, years of experience, continuing education, apprenticeship training and certifying examinations; all evaluated by a board of Certification composed of physicians and qualified athletic trainers, and

WHEREAS, the KMA Committee on School Health, Physical Education and the Medical Aspects of Sports has unanimously approved this resolution, therefore be it

RESOLVED, that the KMA go on record as officially recognizing NATA's certification procedures and certification board, and be it further

RESOLVED, that the Kentucky State Board of Education where and when possible recommend to local boards of education the appointment of certified athletic trainers (NATA) to work with physicians in the important area of health and supervision of athletes.

Recommendations, Reference Committee No. 4

Resolution I—Professional Standards for Athletic Trainers was introduced by the Madison County Medical Society. It was the committee's feeling that this resolution will improve the care of the athletic injuries and recommended the adoption of this resolution.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Resolution J

Daryl P. Harvey, M.D.

WHEREAS, the free enterprise system of medical care is the most moral, the most economical and the most productive of systems, and

WHEREAS, the over-riding contemporary question facing the physician and the patient is; "Shall the medical care system be permitted an orderly evolution under the free enterprise system or shall it be coerced and regimented into an inefficient bureaucracy with the traditional physician and patient relationship reduced to a legal, political or economic entity;" therefore be it

RESOLVED, that this House of Delegates institute a special Free Enterprise Medical Care Committee to be activated in one month; composed of one free enterprise practicing physician from each trustee district; to educate the physicians and the public as to the advantages and the modern mechanics of implementation of free enterprise medicine; and be it further

RESOLVED, that each member of this committee shall be chosen by a majority vote of the KMA delegates from the respective trustee district; and be it further

RESOLVED, that this committee shall by majority vote choose one of its members as chairman; and be it further

RESOLVED, that $25.00 of the yearly KMA dues of each free enterprise practicing physician member and the full facilities of KMA be made available to this committee; and be it further

RESOLVED, that this committee shall report annually to this House of Delegates; its members shall be elected annually, and that it may be terminated only by this House of Delegates.

Recommendations, Reference Committee No. 4

Resolution J—Free Enterprise Medical Care Committee was introduced by Daryl P. Harvey, M.D. Doctor Harvey appeared before this committee and requested the following change in his resolution: that resolved number four be changed to

"RESOLVED, that this committee be empowered by this House to utilize the facilities of KMA to raise through ethical and legal voluntary channels a sum equal to no less than $25 of the yearly dues of each KMA member and that the funds so raised be used to compensate KMA for the use of its facilities and to support this committee in the implementation of this resolution."

After lengthy discussion, the committee recommends disapproval of Resolution J but commends the free enterprise system of medicine and recommends the referral of the concept of this resolution to the Public Relations Committee for consideration.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded.)

At this time, Doctor Harvey recommended that the fourth RESOLVED which he had changed in dis-

cussion with the Reference Committee again be amended to read as follows: "RESOLVED, that this committee be empowered by this House to raise through ethical and voluntary contributions a sum equal to $25.00 for each KMA member and that the funds so raised shall be used to compensate KMA for the use of its facilities and to support this committee in the implementation of this resolution. This committee shall receive no funds from the KMA, and its sole financial support shall be the voluntary contributions aforementioned."

The House accepted Doctor Harvey's recommendation but then defeated the overall resolution and adopted the reference committee recommendation. Doctor Hull was then recognized as Chairman of the Board. He stated that the Board of Trustees would like to express its support of Reference Committee No. 4 because the new committee which has been suggested is repetitious of the basic goals of KMA regarding public relations and regarding free enterprise medical care and that additional solicitation of Kentucky physicians is unnecessary.

Reference Committee recommendation accepted as amended.

Resolution L

Campbell-Kenton County Medical Society

WHEREAS, A Statement of Concern of the Council of the Kentucky Psychiatric Association also has long been a concern of the physicians of Campbell-Kenton County Medical Society.
To Wit:

> "The Council of the Kentucky Psychiatric Association has concern about the trend in Kentucky and other states in which some patients who are thought to need admission to State Hospitals are not admitted and other patients appear to be prematurely released from State Hospitals. Another area of concern is the suitability of some placements outside the hospital for long-term patients. At the present time, the position of the Council is for an open exploration and discussion of admissions and placements in the State system."

WHEREAS, this Society feels a strong need to bring this matter before the State Medical Association, therefore be it

RESOLVED, the Kentucky Medical Association endorse the concern of the Council of Kentucky Psychiatric Association and bring the issues of present admission procedures, discharge procedures and patient placement methods outside the State Hospital system, to the attention of the Legislative Committee of this Association.

Recommendations, Reference Committee No. 4

Resolution L—Concern Regarding State Hospitals by the Council of the Kentucky Psychiatric Association was introduced by the Campbell-Kenton County Medical Society. A lengthy discussion was carried on in regard to this resolution. The committee was made well aware of many problems similar to this resolution which are currently under study by the Kentucky Psychiatric Association. This committee felt, however, that this resolution should be adopted at this time.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Resolution O

KMA Board of Trustees

RESOLVED, that the peer review committees of the KMA Trustee Districts and County Medical Societies be responsible to the Claims and Utilization Review Committee of the Kentucky Foundation for Medical Care as regards reporting, administration and the review process.

Recommendations, Reference Committee No. 4

Resolution O—Peer Review Committees was introduced by the KMA Board of Trustees. This resolution was reviewed by the committee and its adoption is recommended.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Resolution P

Fayette County Medical Society

WHEREAS, third party intermediaries often make their own determination of "reasonable charges" for medical services, and

WHEREAS, should a physician's charges exceed such third party intermediaries' "reasonable charges," the third party may notify the patient that the physician's charges are in excess of such "reasonable charges," and

WHEREAS, no notification of the physician may precede such notification of the patient, and

WHEREAS, third party intermediaries do not always submit disputed claims to peer review, therefore be it

RESOLVED that KMA instruct the Kentucky Foundation for Medical Care, Inc. to begin whatever action is required to work for the modification of existing procedures of intermediaries so that:

1) physicians are notified by the intermediaries when a fee exceeds their usual, customary and reasonable charges so they may present additional information to justify their charges before patients are notified and
2) when there is an unresolved disagreement between a physician and the third party beneficiary concerning a charge, that the disagreement be submitted to a Peer Review Committee, when such is available, for final decision.

Recommendations, Reference Committee No. 4

Resolution P—Disagreements Over Fees was introduced by the Fayette County Medical Society.

This committee is aware of a close relationship of this resolution with Resolution A. However, we do not see any conflict and recommend its adoption.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Mr. Speaker, I move the adoption of the report of Reference Committee No. 4 as a whole as amended.

(Motion was seconded and carried.)

Mr. Speaker, I want to thank Doctors John Baird, Danville; James Holloway, Lexington; William Richardson, Cadiz and Ronald Waldridge, Shelbyville, for their help in the lengthy hearings and preparation of this report.

REFERENCE COMMITTEE NO. 4

Clinton Ray Potts, M.D., Louisville, Chairman
John M. Baird, M.D., Danville
James B. Holloway, M.D., Lexington
William N. Richardson, M.D., Cadiz
Ronald E. Waldridge, M.D., Shelbyville

At this time, Colonel Taylor Davidson was called to the podium to present the following physicians with an award in recognition of their service on the Committee to Selective Service: Glenn U. Dorroh, M.D.; J. Duffy Hancock, M.D.; Sam A. Overstreet, M.D.; and Tom F. Whayne, M.D.

Also at this time, Doctor Greathouse recognized Doctor Hull to make the presentation of awards to the following named physicians who have served for ten years on any one particular KMA committee:

John M. Baird, M.D., Danville (Committee on Community and Rural Health)

Lewis Dickinson, M.D., Glasgow (Hospital Committee)

John E. Eckerle, M.D., Louisville (Committee on Occupational Health, Physical Medicine and Rehabilitation)

Hoyt D. Gardner, M.D., Louisville (Committee on Legislative Activities)

William B. Haley, M.D., Paducah (Committee on School Health, Physical Education and Medical Aspects of Sports)

Esten S. Kimbel, M.D., Frankfort (Advisory Committee to Blue Cross)

James T. McClellan, M.D., Lexington (Advisory Committee to Blue Shield)

Howard B. McWhorter, M.D., Ashland (Advisory Committee to Blue Cross)

Francis M. Massie, M.D., Lexington (Memorials Commission)

William K. Massie, Jr., M.D., Lexington (Committee on Occupational Health, Physical Medicine and Rehabilitation)

Walter L. O'Nan, M.D., Henderson (Committee on Occupational Health, Physical Medicine and Rehabilitation)

George W. Pedigo, M.D., Louisville (Advisory Committee to Blue Cross)

William T. Rumage, Jr., M.D., Louisville (Disaster Medical Care Committee)

Harvey R. St. Clair, M.D., Louisville (Advisory Committee to Blue Shield)

John J. Sonne, M.D., Bardstown (Advisory Committee to Blue Cross)

Garnett J. Sweeney, M.D., Liberty (Advisory Committee to Blue Shield)

Oscar W. Thompson, Jr., M.D., Pikeville (Hospital Committee)

John C. Weeter, M.D., Louisville (Advisory Committee to Blue Shield)

REFERENCE COMMITTEE NO. 5

Richard B. McElvein, M.D.,
Lexington, Chairman

Reference Committee No. 5 considered the following reports:

22. Report of the Liability Insurance Committee
23. Report of the Committee on Business Management and Services
26. Report of the Advisory Committee to Selective Service
40. Report of the Coordinating Commission on Governmental Medical Services
41. Report of the Technical Advisory Committee on Physician Services (Title XIX)
42. Report of the Advisory Committee on Title XVIII
43. Report of the Committee on Appalachian and OEO Programs

Resolution M—Needless Administrative and Nonmedical Nursing Home Visits (Jefferson County Medical Society)

Resolution Q—Mental Health-Mental Retardation Centers (Fayette County Medical Society)

Report of the Liability Insurance Committee

In response to the ever-increasing problem of malpractice claims and associated aggravant factors concerned with professional liability insurance, the KMA Liability Insurance Committee was formed to research and evaluate the malpractice situation as it exists in Kentucky and to determine the feasibility of offering a KMA insurance program on a state-wide basis. This Committee was initially appointed to serve under the Foundation, but because of Internal Revenue Service rulings connected with the Foundation's tax category, was transferred to KMA.

Some fundamental problems which have been created by growing numbers of malpractice claims and litigation proceedings which the Committee would have to consider for resolution or partial relief of the current malpractice situation were that liability claims were increasing by both volume and

dollar amounts which in turn caused prohibitive insurance premiums for physician policyholders, some new physicians and those practicing in "high risk" specialties are often excluded from obtaining professional liability coverage because of the ever-present possibility of litigatory proceedings, many physicians are forced into the practice of defensive medicine, and all these factors when considered jointly result in a total increase in health care costs.

To offset these problems KMA has considered for some time, conducting a feasibility study to determine the practicality of sponsoring a group liability insurance program for members. Guidelines for appropriate Committee actions were adopted which included the examination of coverage possibilities by major insurance carriers who underwrite policies both locally and nationally. It was decided that from these examinations a recommendation would be made as to whether KMA could or should offer group coverage. From this recommendation a carrier would be chosen whose coverage provisions would best suit the needs of the membership. Active promotion and endorsement by KMA of this coverage could then be initiated.

In the course of research for this activity, however, it was discovered that Senate Bill 81 enacted by the 1968 session of the Kentucky General Assembly posed a possible barrier to a KMA-sponsored plan. This bill, an act relating to insurance and groups, suggested that professional liability insurance could not be written on group terms. When this potential restriction was brought to light, legal counsel was contacted and requested to review implementing regulations to this legislation and to contact the State Commissioner of Insurance's Office for full interpretation. As a result of his investigation, counsel learned that in accordance with the 1968 legislation, the underwriting of group liability insurance is in fact prohibited.

Based on these findings and a feeling that no other course of action is pragmatically worthy of pursuit at this time, it is recommended that any further actions by this Committee be postponed pending instructions and guidance from the Board of Trustees or the emergence and identification of malpractice problems amenable to resolution.

Thomas M. Marshall, M.D., Chairman

Recommendations, Reference Committee No. 5

Reference Committee No. 5 reviewed the Report of the Liability Insurance Committee and recommends that this report be accepted.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Business Management and Services

During the past Associational year, the KMA Committee on Business Management and Services met on two occasions. This new Committee was formed this year for the purpose of investigating programs that would provide tangible benefits exclusively for KMA members. These services will be designed to save the members time, effort and money.

At the first meeting held March 2, 1972, the Committee reviewed several programs and services they felt would be of interest to KMA members. After careful consideration, it was the opinion of the Committee that the services that would stimulate the most interest of the members would be an auto leasing program and a health prepayment plan. Therefore, it was decided to make an in-depth study of these two programs.

It was felt that possibly a local auto leasing company could handle the needs of the Association better than a national organization. Therefore, only bids from local auto leasing companies were considered. The Committee also decided that since Blue Cross-Blue Shield had already taken the initiative to set up a health prepayment plan for physicians in the State and since it would take a considerable amount of time to take bids on similar plans, that if the Blue Cross-Blue Shield plan now being offered met with the Committee's approval, they would recommend to the KMA Board of Trustees their endorsement. It was noted that with such an endorsement the Board could then make changes in the plan whenever they felt it was necessary.

On April 6, the Committee met with representatives of a number of local auto leasing companies and representatives of Blue Cross-Blue Shield. After much deliberation, the Committee selected the General Leasing Corporation, of Louisville, to be the administrator of the KMA auto leasing program. The Committee also reviewed the benefits of the Blue Cross-Blue Shield health insurance plan which is available to physicians in the State. It was the opinion of the Committee that this program meets the needs of the physicians; therefore, they recommended that the Board of Trustees adopt this plan in addition to the auto leasing program.

The Board of Trustees met on April 12, at which time they reviewed and approved these recommendations. The Business Management and Services Committee has, therefore, begun implementing these programs and brochures are now being printed. The Committee plans to mail these brochures to each KMA member explaining the details of both programs.

During the coming years, the Committee will continue to review other plans and programs which they feel will be of benefit to KMA members. Programs now under consideration are group travel plans, chartered flight services and disability and life insurance plans.

C. C. Lowry, M.D., Chairman

Recommendations, Reference Committee No. 5

Reference Committee No. 5 reviewed the Report of the Committee on Business Management and Services and recommends the acceptance of this report.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Report of the Advisory Committee to Selective Service

The purpose of this quasi-governmental Committee is to maintain as much as possible an appropriate balance and distribution of medical personnel between our civilian population and the Armed Forces.

In previous years the Committee has met on one or more occasions yearly, and the Chairman has handled most of the additional details by phone or correspondence with the Committee members. During this Associational year, no meetings were necessary since the draft call did not include any physicians, dentists or allied specialists.

On April 15, 1972, the National Selective Service Advisory Committee in Washington, D. C., announced rules under which all members 65 years of age or older or members who had served 10 years or more were to be replaced. This resulted in the replacement of your Chairman and Doctors J. Duffy Hancock, Sam A. Overstreet, Lawrence O. Toomey and Tom F. Whayne.

In accordance with directives contained in the letter from the National Selective Service that your Chairman designate a successor, after consultation with KMA officials, George P. Archer, M.D., Prestonsburg, was selected and has consented to serve.

It has been a pleasure to serve the Kentucky Medical Association and the Selective Service System since October of 1950.

Glenn U. Dorroh, M.D., Chairman

Recommendations, Reference Committee No. 5

The Reference Committee reviewed the Report of the Advisory Committee to Selective Service and recommends its acceptance.

This committee wishes to take cognizance and give long over-due recognition to those members of the committee who have served faithfully for many years—specifically, Glenn U. Dorroh, M.D., Chairman; J. Duffy Hancock, M.D.; Sam A. Overstreet, M.D., and L. O. Toomey, M.D.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Coordinating Commission on Governmental Medical Services

The Coordinating Commission on Governmental Medical Services met once during this Associational year to exchange information concerning activities of our various committees which are related to Federal and State Government projects.

Reports were received from the Claims and Utilization Review Committee, Marvin A. Bowers, Jr., M.D., Chairman; Committee on Appalachian and OEO Programs, Frank M. Gaines, Jr., M.D., Chairman; Committee on Medical Education, E. C. Seeley, M.D., Chairman; Technical Advisory Committee on Physician Services (Title XIX), William T. Watkins, M.D., Chairman; and the Advisory Committee on Title XVIII, Edward N. Maxwell, M.D., Chairman.

The progress and problems of these various committees are reported in detail in their individual reports.

The National Health Service Corps, a new Federal program designed to supply physician and ancillary health care personnel to selected areas of critical shortage, was discussed. Assignments under this program are made only after full community endorsement of a project, including the approval by county and state medical associations, the Comprehensive Health Planning Council and the State Department of Health. The KMA Board of Trustees has endorsed the objectives of this program. Assignment of personnel under this program has been approved for the Frontier Nursing Service in Hyden, Kentucky, and for the Greater Louisville Organization for Health, Inc., Louisville.

In view of the fact that several governmental medical programs in which KMA is involved are not represented on this Coordinating Commission, it was recommended to the KMA Board of Trustees that it consider adding to the Commission's membership a representative of KMA serving on the Comprehensive Health Planning Council, a physician member of the Comprehensive Mental Health Centers and also the Chairman of the new KMA Committee on Health Care of the Poor.

The members of this Commission and of the five committees it represents are commended for their dedication and service.

Edward N. Maxwell, M.D., Chairman

Recommendations, Reference Committee No. 5

Reference Committee No. 5 reviewed the Report of the Coordinating Commission on Governmental Medical Services and recommends its acceptance.

In reviewing the portion of the report dealing with the National Health Service Corps, the Reference Committee recommends that any physician sent to an area of critical shortage under the National Health Service Corps fulfill the requirements of membership of the local county medical society and be acceptable to the local county medical society for that type of practice prior to assignment.

Attention is drawn to that section of the report requesting that the Board of Trustees consider adding to the Commission's membership a representative of the Kentucky Medical Association serving on the Comprehensive Health Planning Council, a physician member of the Comprehensive Mental Health Centers, and the Chairman of the KMA Committee on Health Care of the Poor.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Report of the Technical Advisory Committee on Physician Services (Title XIX)

The five-member, KMA-appointed Technical Advisory Committee on Physician Services (Title XIX) is a quasi-governmental body called for by Kentucky Statutes. It is one of several provider groups "established for the purpose of acting in an advisory capacity to the Advisory Council for Medical Assistance."

This Committee met on four occasions and had excellent attendance. These meetings were generally held prior to the Advisory Council meetings, which were also attended by this Committee's members.

Our Committee has a good relationship with staff assigned members of the State Departments of Health and Economic Security, and we are looking forward to the continuation of this fine relationship.

The Committee would like to point out several events that have taken place during this past year.

1. There were established at local levels peer review committees having primary jurisdiction within each of the 15 KMA Trustee Districts. These committees are now in operation throughout the State. The Trustee District Committees, as well as the State Claims and Utilization Review Committee, have been invaluable to the Technical Advisory Committee in the four or five cases referred to the Committee this past year.

2. Our Committee has gone on record suggesting that the social workers employed by the Department of Economic Security be informed that they should explain to the recipients what services are being paid and those services that are not being paid under the Kentucky Medical Assistance Program. It has also been suggested that a simple brochure be prepared and distributed to each recipient explaining these services and the coverage of payments.

3. This Committee recommended, in a resolution to the Advisory Council, that physician in-hospital services be adequately funded. The payment of usual and customary fees for in-hospital services was the first priority of the Subcommittee on Program Projection of the Advisory Council for Medical Assistance. This was included in the budget submitted by the Departments of Health and Economic Security, but the recommendation was not included in the final budget for the biennium. However, the second priority, an increase in fees for pharmacy services, was approved, and other services were added to the Program. Our Committee will continue to work toward adequate payment for in-hospital physicians' services.

4. The "Lock-in" Project, a pilot program established during the previous Associational year in an effort to reduce over-utilization by recipients of physician and pharmacy services, seems to be serving its purpose. Statistics available after 12 months of operation show that the 171 recipients that were locked in reduced by approximately 50% the cost to the Kentucky Medical Assistance Program for services rendered to these recipients. The "Lock-in" was administered by the Program staff without the addition of personnel or funds. An estimate of the amount of administrative costs directly involving the "Lock-in" indicates that the savings from the "Lock-in" outweighs the administration of it. The "Lock-in" Project will soon be implemented on a state-wide basis, and our Committee has endorsed this implementation.

5. Several additional benefits were added to the Program July 1 of this year. These include Emergency Transportation Services, Screening and Diagnostic Services for children 0-5 years of age, a Hearing Program to include hearing aids for children 0-5, and a Vision Care Program for children 0-5. The age limitations are to be expanded by July, 1973, to include ages 0-20. Although the addition of some of these benefits are required by Federal law, our Committee has again expressed its displeasure at the addition of new benefits when priorities have not yet been funded.

As Chairman, I wish to thank the dedicated members of this Committee who have served diligently in the interest of an improved Medicaid Program in Kentucky.

William T. Watkins, M.D., Chairman

Recommendations, Reference Committee No. 5

The Reference Committee reviewed the Report of the Technical Advisory Committee on Physician Services (Title XIX) and heard testimony including Item Three urging that physicians be paid usual and customary fees for in-hospital services. The Reference Committee recommends the acceptance of this report.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Advisory Committee on Title XVIII

This Committee met once during this Associational year with representatives of the Medicare carriers in attendance to discuss problems encountered both by the physicians and the carriers in administering this program.

The representative of the Part B carrier explained the method of calculating the reimbursable charges to be used in fiscal year 1973, which will be based on 1971 data. A formula will be applied to assure that increases allowed will not exceed the 2.5% guideline established by the Price Commission.

It was also pointed out that Medicare will begin allowing only one hospital visit per day to a patient unless the physician documents the medical necessity for more than one visit.

With respect to nursing home visits covering several patients on the same visit, Medicare will pay based on the physician's customary charge for office visits for each patient seen. Documentation will be required if more than one nursing home visit per month per patient is submitted.

The Medicare Part B office in Lexington is now

100% computerized, and it is requested that if physicians detect errors, they should not hesitate to notify Metropolitan. The average Part B claim in Kentucky now takes 14 days for processing and payment.

A pamphlet entitled "Medicare Misconceptions," distributed by the Illinois State Medical Society, was reviewed. It appeared to explain to the patient many aspects of the Medicare program which a beneficiary might not understand, and it was recommended by the Committee to the KMA Board of Trustees that a similar type pamphlet with modifications to meet the Kentucky situation be made available through KMA to all physicians in the State.

We appreciate the interest and diligence of our Committee members during this Associational year.

Edward N. Maxwell, M.D., Chairman

Recommendations, Reference Committee No. 5

Reference Committee No. 5 reviewed the Report of the Advisory Committee on Title XVIII and recommends the acceptance of this report.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Appalachian and OEO Programs

The Committee held two meetings during the year. In a review of the Kentucky OEO programs and Appalachian programs, we noted new developments as follows:

1. The Park DuValle Project in Louisville plans to expand its service to include the near poor who must pay a percentage of the cost for health service they receive.

2. A new OEO program in Lexington has been authorized under the leadership of the Hunter Foundation. The medical director of the program spent an afternoon with the Committee describing his plans. The highlight of this is that the OEO has spent a longer time in planning how the project will fit into existing medical facilities in the area. It is to be arranged as an HMO and the OEO will reimburse the program on the basis of number of poor persons enrolled.

3. The Appalachian Regional Health Program is planning a demonstration HMO in the Southeastern Kentucky Regional Health Demonstration Project. A project director has been appointed and plans are in the process.

4. There have been a number of administrative problems in the OEO project in the Leslie, Perry and Knott County Project which the Committee will plan to investigate further in the fall.

5. Appalachian Health Program money has been used to support, in part, some of the Comprehensive Mental Health Centers in Southeastern Kentucky so that our Committee has had some interest in these but has not taken any extensive look into their operation or effectiveness. It is the recommendation of the Committee to the Board of Trustees that another separate committee monitor the growing chain of State and Federally supported mental health centers.

6. As a follow-up of our meetings with the Floyd County OEO Program in 1970-71, we offered Committee assistance. A Committee member from Floyd County reported that the program was being reorganized with a new Board of Directors and he would call on us if need be.

Frank M. Gaines, M.D., Chairman

Recommendations, Reference Committee No. 5

Reference Committee No. 5 reviewed the Report of the Committee on Appalachian and OEO Programs and wishes to point out to the House of Delegates that it endorses the establishment of a new committee charged with the responsibility of monitoring the growing chain of State and Federally supported mental health centers. The Reference Committee recommends the acceptance of the report.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

Resolution M

Jefferson County Medical Society

WHEREAS, HEW and Medicaid rules require monthly visits to patients and recently have required the physicians physically sign, within forty-eight hours, all phoned treatment orders and

WHEREAS, this is most often a poor and inefficient use of physician time, plus an unnecessary increase in cost to our patients, therefore be it

RESOLVED, that this House of Delegates go on record as being for quality care for patients in extended and custodial care facilities but against administrative rather than professionally indicated nursing home visits, and be it further

RESOLVED, that this action be published in the major communications media of the Commonwealth.

Recommendations, Reference Committee No. 5

Reference Committee No. 5 reviewed Resolution M, introduced by the Jefferson County Medical Society, concerning Needless Administrative and Nonmedical Nursing Home Visits. The committee recommends the acceptance of this resolution.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded.)

At this time, Doctor Hull, Chairman of the Board of Trustees, was recognized to submit a substitute, drawn up by the Board, for Resolution M as follows:

WHEREAS, HEW and Medicaid rules require medically justified monthly and other medically indicated visits to nursing home patients, but have recently required that physicians physically sign, with-

in 48 hours, all phoned treatment orders; and

WHEREAS, this is often a poor and inefficient use of physician time plus an unnecessary increase in cost to our taxpayers; and

WHEREAS, a physician's time is a valuable community asset and should not be wasted on an early nursing home visit unless the physician deems such early visit medically indicated; therefore be it

RESOLVED, that this House of Delegates go on record as being for quality care in extended care facilities, but against administrative rather than professionally indicated nursing home visits; and be it further

RESOLVED, that all nursing homes and hospitals be required to provide, for the signing by the physician, the initial certification form for Medicaid and Medicare and the admission orders for the nursing home at the hospital by the time the patient is transferred from the hospital in order that this information will be available on admission to the nursing home; and be it further

RESOLVED, that signed authentication of telephoned additional medications and routine procedure orders to nursing home facilities may be carried out either in person within 48 hours or by mail as soon as possible when a personal visit is not medically indicated within 48 hours.

A motion was made, seconded and passed to adopt the substitute resolution as submitted by the Board of Trustees.

Resolution Q

Fayette County Medical Society

WHEREAS, mental health-mental retardation centers have been in existence for six years and are providing health services for the citizens of Kentucky, and

WHEREAS, there is a question that this care is being rendered on a satisfactory cost efficiency and quality basis, therefore be it

RESOLVED that the Kentucky Medical Association urge the state comprehensive health planning agency to study the cost, patient load and care, staffing, and efficiency of the comprehensive mental health-mental retardation centers and inform the citizens of Kentucky and the Kentucky Medical Association of its findings.

Recommendations, Reference Committee No. 5

Reference Committee No. 5 reviewed Resolution Q, introduced by the Fayette County Medical Society, concerning Mental Health-Mental Retardation Centers. The Reference Committee recommends the adoption of this resolution.

Mr. Speaker, I move the adoption and implementation of this section of the report.

(Motion was seconded and carried.)

This Reference Committee strongly urges that in the future committee chairmen, or an appointed representative, be present when the reports are being reviewed by the Reference Committees so that the Reference Committees may work more effectively.

Mr. Speaker, I move the adoption of the Report of Reference Committee No. 5 as a whole as amended.

(Motion was seconded and carried.)

Mr. Speaker, I would like to thank each member of this committee for his help in reviewing these reports and writing the Reference Committee report and Mrs. Doris Crume for her assistance.

REFERENCE COMMITTEE NO. 5

Richard B. McElvein, M.D., Lexington, Chairman
Keith M. Coverdale, M.D., Bowling Green
Kenneth P. Haywood, M.D., Earlington
David C. Shipp, M.D., Louisville
Walter H. Stepchuck, M.D., Harlan

REFERENCE COMMITTEE NO. 6

Glenn W. Bryant, M.D.,
Louisville, Chairman

Reference Committee No. 6 considered the following reports:

11. Report of the Judicial Council
13. Report of the Rural Kentucky Medical Scholarship Fund
27. Report of the Committee to Study the Constitution and Bylaws
28. Report of the Interim Meeting Program Committee
29. Report of the McDowell House Board of Managers
30. Report of the Memorials Commission
32. Report of the Committee on Orientation
45. Report of the Committee on Plans and Development, Paragraph 11 on Page 53 referred to Reference Committee No. 2
5. Report of the Chairman, Board of Trustees, Paragraph 1 on Page 12 relating to the Building Committee and Paragraph 6 on Page 12 relating to the Ad Hoc Committee on Orientation only

Report of the Judicial Council*

As predicted in our report to you last year, the work of the Judicial Council has continued to increase. Whereas six meetings were sufficient in 1970-71, eight were required in the Associational year just closed.

The Council received four complaints charging physicians with having billed their patients for excessive or improper fees. The Council feels that it is ill equipped to deal with fee complaints and recommends that they be handled by the Claims and Utilization Review Committee of the Kentucky Foundation for Medical Care which, if unable to

**The Report of the Ad Hoc Committee to study Judicial Council Matters follows the Digest of Proceedings, on page 1016.*

resolve the matter, can forward it to the Judicial Council for final disposition.

Two members were suspended for improper handling of dangerous drugs and narcotics. One member, suspended last year, was approved for re-instatement and one physician who resigned last year at the suggestion of the Council, was given leave to reapply for membership.

The suit which was filed last year to enforce the Council's ruling that it was unethical for physicians and their immediate families to hold stock in small repackaging houses, was dismissed when the pharmaceutical company supplied the names of its KMA-related subscribers and evidence that all had divested themselves of any interest in the company.

The Council considered a total of 54 separate matters involving medical ethics and rendered the following opinions of general interest to the profession:

1. That despite the fact that it is not illegal for a physician to prescribe birth control pills for girls under 18 years of age, it is unethical for him to do so without the knowledge and consent of at least one of the parents.

2. That it is unethical for physicians to permit the clinic by which they are employed or with which they are associated, to circularize the profession with material (whether by direct mail or through articles in a magazine) which gives their names and lists the services they are prepared to render on referral.

3. That it is unethical for physicians who have their offices in one city, to purchase a yellow page listing in the telephone directories of neighboring towns. The Council ruled that whether to permit physicians to list or be listed under one or more specialties was a matter of local concern to be resolved by the county society.

4. That it is unethical for surgeons located in one city to travel to outlying towns to do surgery unless they examine the patient prior to the surgery and make their own diagnosis, write the pre-operative and post-operative orders and provide the post-operative care. The surgeon's charging of his usual and customary fee (which ordinarily includes post-operative care) while allowing the referring physician to provide (and charge for) the post-operative care was specifically condemned.

5. That it is not improper or unreasonable for hospitals to require physicians to take their turn on call at the emergency room, as a condition of staff membership.

6. That the practice of midwifery is not the practice of medicine and midwives may not practice anesthesia.

7. That a technician (however well trained) who is not a licensed physician, cannot qualify as a first assistant on major surgery.

8. That the practice of anesthesia is a part of the practice of medicine and that the administration of anesthetics by personnel who are neither physicians nor their directly supervised agents should be challenged in the courts.

The Council remains dedicated to the principles that the medical profession must police itself and enforce the Principles of Medical Ethics if it is to remain a profession rather than a trade. The active assistance and cooperation of all ethical physicians is essential to such an endeavor and the Judicial Council earnestly solicits the support of every member of the Association.

N. L. Bosworth, M.D., Chairman

Recommendations, Reference Committee No. 6

Reference Committee No. 6 next reviewed the Report of the Judicial Council. Several Association members attending the committee meeting discussed many aspects of this report. This report contained eight principles of ethics. The first proposed principle relating to the prescribing of birth control pills to girls under 18 provoked the most discussion. The Reference Committee disagrees with this ruling and proposes that the House of Delegates go on record as not ratifying this as an Association policy.

Mr. Speaker, I move the adoption of this section of the report of the Judicial Council.

(Motion was seconded.)

At this time, a motion was made to suspend the rules so that Resolution N could be introduced as New Business on the floor of the House. Resolution N now reads as follows:

Resolution N

WHEREAS, the Kentucky General Assembly has seen fit to enact a statute causing to be lawful and legal the providing of contraceptive advice to individuals under the age of eighteen (18) with or without consent of parents, and

WHEREAS, the Judicial Council of the KMA has ruled that compliance with this law to be unethical conduct by physician members of the KMA, and

WHEREAS, many, if not most, contraceptive devices, mechanical and chemical are readily available, publicly advertised and can be purchased without prescription by anyone, regardless of age, and

WHEREAS, it is important as physicians we realize that our medical knowledge must be utilized and made available for the best interests and health of all people, and

WHEREAS, as physicians we must further recognize that this is a medical problem, neither theological nor philosophical, and

WHEREAS, the integrity of physicians, practicing in good conscience, good faith, and good judgment, must be recognized if individual physicians are asked to respect their elected and appointed leaders of KMA and its Judicial Council, therefore be it

RESOLVED, that this House of Delegates go on record as questioning the ruling of the Judicial Council, and that it does not consider it unethical for a physician to comply with the law of the Commonwealth of Kentucky with regard to the prescribing of contraceptive advice to minors.

(Motion was seconded and carried.)

The Reference Committee agrees with the remaining seven principles of ethics and recommends their ratification.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded.)

At this time, the House took separate action on the remaining seven subjects of the Judicial Council Report.

Fayette County moved that Item 2 be referred back to the Judicial Council for clarification because it seems to include all announcements by any physician. Motion was seconded and carried.

A motion was made and seconded that Item 3 be amended to read: "Listing of physicians in yellow pages of neighboring cities or under one or more specialties is a matter of local concern to be resolved by the county society." Motion was seconded and carried.

Doctor Nelson Rue of Warren County moved that Item 4 be referred back to the Judicial Council for reconsideration and futher clarification. Motion was seconded and carried.

Doctor Bennett Crowder of Christian County moved that the Judicial Council reconsider Item 5.

Fayette County moved that Items, 6, 7, and 8 be referred back to the Judicial Council for further consideration because the mainstream of medicine is going in the direction of physicians' assistants. Motion was seconded and carried.

Following considerable discussion on the Judicial Council Report, Doctor Neville Caudill was recognized to submit the following motion: "That the House of Delegates instruct the Board of Trustees to appoint an ad hoc committee to study the function of the Judicial Council with reference to the changes in the Bylaws in order to provide for prompt appeal for decisions from the Judicial Council, with a reasonable amount of independence from the Judicial Council, but with the House of Delegates being the final appeal authority." Motion was seconded and passed.

Report of the Rural Kentucky Medical Scholarship Fund

Following a suggestion of a special Ad Hoc Committee appointed by the KMA Board of Trustees, a mailing was sent to every physician in Kentucky on April 18, 1972. It was the suggestion of the Committee that the entire KMA membership should be better informed of the superb accomplishments of the Fund in its first 26 years of operation. A map showing the location of recipients and a brochure explaining the history, purpose and detailed operation of the Fund was included in the mailing. A copy of all contracts used by the program was mailed to each County Society Secretary.

The Fund, established in 1946 for the purpose of providing a better distribution of physicians in rural Kentucky, now has 178 physicians in practice in 88 counties, with 23 serving in critical counties.

There are now outstanding 316 notes to 132 borrowers, for a total in excess of $513,000. These recipients are either in medical school, interning, or in the armed services. Approximately five per cent of the students in Kentucky's two medical schools are recipients.

All loans and contracts are processed at the KMA Headquarters Office. Progress reports are secured on students in medical school, and contact is maintained with interns, recipients in the Armed Services and past recipients in practice. The Louisville Trust Company serves as the fiscal agent for the Fund.

This year, regular annual loans were increased from $2,000 to $2,500; and critical county loans were increased from $2,500 to $3,000. The loan agreements are to medical students who are residents of Kentucky and have agreed to practice in an approved area of the State one year for each loan received. Forgiveness features are applicable to recipients who establish practice in designated areas of critical or semi-critical need.

Four new members have been elected to the Board of Trustees. They are: Carolyn S. McKinley, M.D., Glasgow; Raymond D. Wells, M.D., Inez; Robert Chambliss, M.D., Hardinsburg; and Westel L. Creager, M.D., Marion.

John C. Quertermous, M.D., Past President of the Kentucky Medical Association, was elected Vice-Chairman of the Board succeeding Russell Hall, M.D., of Prestonsburg, whose resignation from the Board was accepted with sincere appreciation for his past services. Henry S. Spalding, M.D., of Bardstown, was named Chairman of the Postgraduate Committee of the Fund.

Doctor Simpson, in noting the success of the program over the past 26 years, expressed particular appreciation for the interest and support of Governor Wendell H. Ford, Health Commissioner William P. McElwain, M.D., and the members of the Kentucky General Assembly.

G. L. Simpson, M.D., Chairman

Recommendations, Reference Committee No. 6

Reference Committee No. 6 reviewed the Report of the Rural Kentucky Medical Scholarship Fund. The Chairman of this committee, G. L. Simpson, M.D. was present to make comments on this report, as well as answer questions from the audience.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee to Study the Constitution and Bylaws

Your Committee to Study the Constitution and Bylaws met this year on May 18 for its annual session to implement Bylaws changes that had been proposed to the Committee and to generally update the Bylaws.

Since there are no Constitutional changes this year, our format for presentation will be to first present our recommendations and reasons for submitting any proposed changes. Secondly, we will

quote the wording of the present section of the Constitution and Bylaws, and thirdly, present the proposed amendment to the Constitution and Bylaws.

Amendments to the Bylaws

RECOMMENDATION

The Judicial Council of KMA recommended that the Committee to Study the Constitution and Bylaws consider an amendment which would permit the Judicial Council to condition KMA membership.

Conditional approval of membership, as presented below, is broad enough to allow the Judicial Council to attach appropriate limitations or restrictions, depending upon the facts of a particular case.

CHAPTER I, Membership

Present Section 1: Membership in this Association shall be coterminous with membership in a component county society. No physician shall be eligible for membership in this Association unless he is a member, in good standing of a component society, nor may he maintain membership in a component county society unless he is a member, in good standing of this Association.

When a physician who meets the qualifications hereinafter set forth, is certified to the Secretary as a member in good standing of a component society, properly classified as to type of membership, and when the dues pertaining to his membership classification have been received by the Secretary of the Association, the name of the member shall be included in the official roster of the Association and he shall be entitled to all the privileges of his class of membership. Provided, however, that members in good standing from other state societies may, if admitted to membership by a component society, be accepted by KMA for membership without paying dues for the remainder of the calendar year in which the transfer is made. Provided further, that the Board of Trustees shall have power, upon written application, approved annually by the county society of which the applicant is a member, to excuse any member from the payment of dues because of financial hardship.

Proposed Section 1: Membership in this Association shall be coterminous with membership in a component county society. No physician shall be eligible for membership in this Association unless he is a member, in good standing of a component society, nor may he maintain membership in a component county society unless he is a member, in good standing of this Association.

When a physician who meets the qualifications hereinafter set forth, is certified to the Secretary as a member in good standing of a component society, properly classified as to type of membership, and when the dues pertaining to his membership classification have been received by the Secretary of the Association, the name of the member shall be included in the official roster of the Association and he shall be entitled to all the privileges of his class of membership. Provided, however, that members in good standing from other state societies may, if admitted to membership by a component society, be accepted by KMA for membership without paying dues for the remainder of the calendar year in which the transfer is made. Provided further, that the Board of Trustees shall have power, upon written application, approved annually by the county society of which the applicant is a member, to excuse any member from the payment of dues because of financial hardship. And provided further, that the Judicial Council, after a hearing, shall have power to condition membership in this Association upon the physician's agreement to limit the scope of his practice in any manner reasonably calculated to protect the public from the adverse effects of any demonstrated frailty or disability of said member.

RECOMMENDATION

There has been some confusion in the past resulting in some county public health officers applying for associate KMA membership. As a method of clarifying this circumstance, we offer the following change:

CHAPTER I, Membership

Present Section (d) (1): Medical officers of the United States Army, Navy, Air Force, Veterans Administration, Public Health Service, or other governmental service while on duty in the State.

Proposed Section (*d*) (1): Medical officers of the United States Army, Navy, Air Force, Veterans Administration, Public Health Service, or other federal governmental service while on duty in the State.

RECOMMENDATION

KMA has had a requirement since 1965 that all new members of the Association attend an orientation program within the first three years after he is admitted to active membership. This requirement has caused some misunderstanding and bitterness on the part of the membership and the Board of Trustees has excused all members from attending the orientation course this year and has recommended, through this Committee, that the orientation program be discontinued. This can be accomplished by deleting the entire paragraph of Chapter 1, Section 5.

CHAPTER I, Membership

Present Section 5: Every new member shall be required to attend and successfully complete an orientation course to be presented at stated intervals by the Board of Trustees or one of its committees. The form and content of this course shall be prescribed by the Board; and unless excused by the Board for good cause shown, failure to attend and successfully complete the course within three years after the member is first admitted to active membership shall automatically revoke the delinquent's membership and terminate all of his rights and privileges as a member; and he shall thereafter, for a period of one year, be ineligible for membership in any component society and shall not after one year be admitted to membership unless and until he has successfully completed the required orientation course.

Proposed Section 5: Delete entire section.

RECOMMENDATION

The Judical Council has offered an amendment to

the Bylaws which would spell out the status of a suspended member.

CHAPTER VII, Discipline — The Judicial Council

Present Section 2: The Judicial Council shall be the Board of Censors of the Association. It shall be the final arbiter of all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates shall be referred to the Judicial Council without discussion. A member who has been convicted of a felony or of any violation of the Medical Practice Act, or who violates any of the provisions of the constitution, bylaws, or any rule or regulation of this Association, or the Principles of Ethics of the American Medical Association shall be liable to censure, fine, suspension, or expulsion upon order of the Judicial Council. Provided, however, that if in addition to discipline by the Association, the Judicial Council shall be of the opinion that the offending member's license to practice medicine should be revoked, it shall report this to the Board of Trustees as a recommendation that the Board refer the matter to the State Board of Health for this purpose.

Upon the complaint of any member or aggrieved individual involved, the Judicial Council may initiate disciplinary proceedings against any member, and may intervene in or supersede county, individual trustee, or district disciplinary proceedings, whenever in its sole judgment and opinion, a disciplinary matter is not being handled in an expeditious manner, and may render a decision therein. In all cases in which the Association, rather than a member or aggrieved individual, appears to be the real party in interest, the Judicial Council may refer the complaint to the Board of Trustees for a determination as to whether probable cases for disciplinary action exist. If the Board of Trustees resolves this question in the affirmative, it shall so charge the respondent, and a representative of the Board shall thereupon be responsible for presenting the evidence in support of such charge at any hearing held thereon.

In all proceedings of the Judicial Council, the due process requirements of reasonable notice and a full and fair hearing shall be observed. No recommended disciplinary decision of an individual trustee or any district grievance committee shall become effective unless and until approved by the Judicial Council.

Proposed Section 2: The Judicial Council shall be the Board of Censors of the Association. It shall be the final arbiter of all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates shall be referred to the Judicial Council without discussion. A member who has been convicted of a felony or of any violation of the Medical Practice Act, or who violates any of the provisions of the constitution, bylaws, or any rule or regulation of this Association, or the Principles of Ethics of the American Medical Association shall be liable to censure, fine, suspension, or expulsion upon order of the Judicial Council. Provided, however, that if in addition to discipline by the Association, the Judicial Council shall be of the opinion that the offending member's license to practice medicine should be revoked, it shall report this to the Board of Trustees as a recommendation that the Board refer the matter to the State Board of Medical Licensure for this purpose.

Suspension shall be for a specified period during which the member shall remain liable for the payment of dues but shall not be eligible to hold office, attend meetings or otherwise participate in Associational activities at the county, district or state levels. Upon the expiration of the period of suspension, every suspended member shall be automatically restored to all of the rights and privileges of his class of membership unless the Judicial Council determines that his conduct during the period of suspension indicates that he is unworthy of such restoration, in which event his suspension may be extended or he may be expelled.

Upon the complaint of any member or aggrieved individual involved, the Judicial Council may initiate disciplinary proceedings against any member, and may intervene in or supersede county, individual trustee, or district disciplinary proceedings, whenever in its sole judgment and opinion, a disciplinary matter is not being handled in an expeditious manner, and may render a decision therein. In all cases in which the Association, rather than a member or aggrieved individual, appears to be the real party in interest, the Judicial Council may refer the complaint to the Board of Trustees for a determination as to whether probable cases for disciplinary action exist. If the Board of Trustees resolves this question in the affirmative, it shall so charge the respondent, and a representative of the Board shall thereupon be responsible for presenting the evidence in support of such charge at any hearing held thereon.

In all proceedings of the Judicial Council, the due process requirements of reasonable notice and a full and fair hearing shall be observed. No recommended disciplinary decision of an individual trustee or any district grievance committee shall become effective unless and until approved by the Judicial Council.

RECOMMENDATION

There are two recommendations concerning Chapter IX, Assessments and Expenditures. The first relates to the inclusion of a dues for "In-training" members and the second concerns permission for the Board of Trustees to institute central billing for KMA dues at a time deemed advisable by them.

Last year, an "In-training" category was established which gave interns, residents and teaching fellows who are doctors of medicine or osteopathy the right to vote and receive publications of the Association but not be counted in determining the number of delegates to which their county society is entitled in the House of Delegates. These individuals were formerly under the Associate Membership category and paid annual dues of $10. When the Bylaws were changed last year, this category was not changed in Chapter IX, thus it is recommended that this section be changed as follows below.

Also, this past year, the House of Delegates went on record as approving centralized billing of dues when judged feasible by the Board of Trustees. The following second amendment would change the Bylaws to officially give the Board of Trustees this authority.

CHAPTER IX; Assessments and Expenditures

Present Section 1 *and* 2:

Section 1: The annual dues for membership in this Association shall be as follows: (1) Active Members, $130, except that the dues for new members entering practice for the first time shall be $80 per year for the first three full years of practice; (2) Emeritus Members, no dues; (3) Associate Members, $10; (4) Inactive Members, $10; (5) Student Members, $1; (6) Service Members, no dues; (7) Special Members, no dues. Dues fixed by these Bylaws shall constitute assessments against the component societies. The Secretary of each component society shall forward its assessments together with its properly classified roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association as of the first day of January each year.

Section 2: Any component society which fails to pay its assessments, or make the report as required, on or before the first day of April in each year, shall be held as suspended and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Proposed Section 1 *and* 2:

Section 1: The annual dues for membership in this Association shall be as follows: (1) Active Members, $130, except that the dues for new members entering practice for the first time shall be $80 per year for the first three full years of practice; (2) Emeritus Members, no dues; (3) Associate Members, $10; (4) In-Training Members, $10; (5) Inactive Members, $10; (6) Student Members, $1; (7) Service Members, no dues; (8) Special Members, no dues. Dues fixed by these Bylaws shall constitute assessments against the component societies. Unless otherwise instructed by the Board of Trustees (which may institute centralized billing) the Secretary of each component society shall forward its assessments together with its properly classified roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of the Association as of the first day of January each year.

Section 2: Unless otherwise provided by the Board of Trustees pursuant to Section 1 hereof, any component society which fails to pay its assessments, or make the report as required, on or before the first day of April in each year, shall be held as suspended and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

RECOMMENDATION

The Board of Trustees has recommended that the House of Delegates use "Sturgis" as its resource for governing parliamentary procedure.

Present Chapter XI, Rules of Order: The deliberations of this Association shall be governed by parliamentary usage as contained in Robert's Rules of Order, unless otherwise determined by a vote of its respective bodies.

Proposed Chapter XI, Rules of Order: The deliberations of this Association shall be governed by parliamentary usage as contained in the latest edition of Sturgis' Standard Code of Parliamentary Procedure, unless otherwise determined by a vote of its respective bodies.

RECOMMENDATION

The Committee noted, that under the present system used by KMA, a change in Bylaws could be recommended by a reference committee. Since reference committee reports are acted upon during the final meeting of the House of Delegates, the Committee feels a two-thirds vote should be required rather than a majority as now stands.

Present Chapter XIII, Amendments: These Bylaws may be amended at any session of the House of Delegates by a two-thirds vote of all the delegates present at that session, after the amendment has laid on the table for one day, provided, however, that an amendment may be proposed in the report of a reference committee and considered by the House without having laid on the table for one day.

Proposed Chapter XIII, Amendments: These Bylaws may be amended at any session of the House of Delegates by a majority vote of all the delegates present at that session, after the amendment has laid on the table for one day, whereas any amendment proposed in a reference committee not having laid on the table for two days, requires a two-thirds vote.

Robert L. McClendon, M.D., Chairman

Recommendations, Reference Committee No. 6

Reference Committee No. 6 considered as its first order of business under the Report of the Committee to Study the Constitution and Bylaws, the motion offered, with unanimous consent of the House of Delegates, by David B. Stevens, M.D., to delete from Section 2, Chapter VII, the sentence which reads as follows: "All questions of an ethical nature brought before the House of Delegates shall be referred to the Judicial Council without discussion," and further to add Section 10 to read as follows: "All questions of an ethical nature as proposed by the Judicial Council should be ratified by the House of Delegates before becoming accepted policy of the Association." The Reference Committee recommends the following changes in Doctor Stevens' motion: "That Chapter VII, Section 2 shall read, 'All charges of breach of medical ethics brought before the House of Delegates shall be referred to the Judicial Council without discussion'."

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded.)

The House voted to amend the reference committee report to read as follows: The Reference Committee recommends the following changes in Doctor Stevens' motion: "That the third sentence of the first literary paragraph of Chapter VII, Section 2 shall read, 'All charges of breach of medical ethics brought before the House of Delegates shall be referred to the Judicial Council without discussion.' "

This Reference Committee further recommends that an additional Section 10 be added to Chapter VII of the Bylaws to read as follows: "The Judicial Council shall annually report to the House of Delegates any rulings that have universal application, and the House shall have the power to modify the prospective effect of such rulings as the circumstances dictate."

Mr. Speaker, I move the adoption of this section of the report.

At this time, Doctor James B. Holloway was recognized to submit the following: The Fayette County delegation moved that an additional sentence be added to the proposed new Section 10 of Chapter VII of the Bylaws so that Section 10 reads: "The House of Delegates shall ratify or reject such interpretations of the principles of medical ethics as the Judicial Council may propose. The Judicial Council shall annually report to the House of Delegates any rulings that have universal application, and the House shall have the power to modify the prospective effect of such rulings as the circumstances dictate."

(Motion was seconded and carried.)

There were proposed changes presented in Chapter I, Section 1; Chapter I, Section 1 (d) (1); Chapter I, Section 5; Chapter VII, Section 2; Chapter IX, Sections 1 and 2; Chapter XI, Rules of Order; and Chapter XIII, Amendments.

This Reference Committee recommends approval of all the proposed changes in the Bylaws with the following editorial changes:

In Proposed Section 2 of Chapter VII, in the second line of the second column, on Page 35 of the Reports Booklet, the word, "business," should be inserted between the words, "attend," and "meetings," to read as follows: ". . . but shall not be eligible to hold office, attend *business* meetings . . ." and in the following paragraph in lines 13 and 14, the word, "cause," should be inserted between the words, "probable," and "for" and in line 14, the word, "exists," should be inserted before the word, "if," to read as follows: ". . . to whether probable cause for disciplinary action exists. If the Board . . ."

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Interim Meeting Program Committee

The Interim Meeting Committee met last November 18 to plan our program for the 1972 Interim Meeting. Our session was held at the Somerset Holiday Inn, site of the Interim Meeting, so that we could review the facilities and make definitive plans.

A new format for the meeting was used successfully last year which called for a morning session, free afternoon, dinner session and a closing program the following morning. The Committee enthusiastically agreed to repeat that format for 1972.

Details of these three sessions were finalized and coordinated with related meetings held in conjunction with the Interim Meeting. The theme "Changes and Challenges—You Are Involved" was adopted and speakers were selected. We were pleased to have had excellent and authoritative speakers such as Carl Hoffman, M.D., Huntington, W. Va., then AMA President-Elect, and U. S. Senator Wallace F. Bennett of Utah.

We felt our subjects to be timely, our speakers knowledgeable and persuasive and our audience, although small, attentive and appreciative. Your Committee feels that the importance of the Interim Meeting increases every year. Medicine has more and more socio-economic matters to contend with each day and the Interim Meeting is our main source for dissemination and exchange of thoughts on such significant activities.

Due to a reduced attendance at this year's meeting, which was held during KEA week, plans are for the 1973 Interim Meeting to be held prior to KEA week on March 29 and 30, at Lake Barkley.

Your Committee wishes to recommend the continuance of the Interim Meeting for 1973 with the same format as that utilized in 1972, mainly a general session on Thursday morning, a free afternoon and an evening session with the meeting closing at noon on Friday. The Board of Trustees would meet on Wednesday preceding the Thursday general sessions.

In closing, we wish to express appreciation to the Woman's Auxiliary and particularly to the Pulaski County Medical Society for their cooperative efforts in assuring a successful program.

John S. Harter, M.D., Chairman

Recommendations, Reference Committee No. 6

Reference Committee No. 6 next considered the Report of the Interim Meeting Program Committee. This report was reviewed and accepted.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the McDowell House Board of Managers

During the past year, the Board of Managers of the McDowell House has met quarterly, although the past three meetings have been bimonthly. During these meetings at the House, the status of the restoration and its furnishings have been carefully examined. Its condition is remarkably sound and, in-

deed, a symbol of which the Kentucky Medical Association may be justifiably proud. Constant repairs, in addition to some improvements, are necessary. Painting of the House has been completed and repair of the roof has been accomplished.

During the year, a significant change has occurred in the House in the establishing of a permanent Secretary-Bookkeeper at a modest salary. This allows for the care of the minutiae of a very old house in a better guardianship manner. Quarterly detailed financial reports are submitted to KMA and the books are audited by KMA auditors. It is a pleasure to the Board that William Walter, Jr., Comptroller of Centre College, is contributing his time to aid in the supervision of our local Secretary-Bookkeeper. The Board believes this is a real improvement.

The income from admissions is steadily increasing and amounts to about $3,000 per year. The sale of prints, books and pamphlets have also added a degree of income.

On November 11, 1971, notice was taken of the 200th anniversary of the birth of Ephraim McDowell. Medals were struck in bronze and silver and are available for sale at the House. The cost of these medals was underwritten by certain members of the Board and all profits will accrue to the McDowell House.

Considerable interest has been evoked in the Urban Renewal changes in the area surrounding the House in Danville. It is possible that the McDowell House may receive additional property surrounding the House by some arrangement. This would be for its protection.

During the year, the Auxiliary of KMA and its multiple county auxiliaries have become increasingly active in visiting and supporting the House. They have added much to replacements of draperies, upholstering and the like in various rooms.

The Chairman of the Board of Managers especially would like to thank the lay members of this Board who are exceedingly interested and contribute their energies and time faithfully. The professional members of this Board, equally, have an intense interest and are adding greatly to the further recognition of this international shrine. Finally, the Chairman urges every member of KMA to bring his family and visit this great monument to medicine.

Laman A. Gray, M.D., Chairman

Recommendations, Reference Committee No. 6

Reference Committee No. 6 next reviewed and accepted the Report of the McDowell House Board of Managers.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Memorials Commission

The Memorials Commission held one meeting this past Associational year on May 4, 1972.

The Commission takes pleasure in acknowledging receipt of several items donated to the KMA Headquarters Office during the past year. A number of medical books from the original collection of Edward T. Polk, M.D., were donated by Dudley Wetherby, of Louisville. Naomi Jett Chaney presented the Commission with a picture of the 1914 KMA Convention held at the Blue Grass Inn in Newport, Kentucky. The Commission also acquired a number of books and papers from the estate of Mrs. Arthur T. McCormack wife of the late Arthur T. McCormack, M.D.

With the completion of the new addition to the KMA Headquarters Office, the Memorials Commission once again plans to conduct a furniture memorial project to help defray the cost of equipping the new meeting rooms. A letter of invitation will be sent to all physicians who have served as KMA officers and trustees during the past ten years requesting their assistance in furnishing the new facility by the purchase of memorial gifts.

The Commission continues its effort to secure a portrait of William L. Sutton, M.D., first KMA President, in order that it will be displayed at the KMA Headquarters Office. We are presently investigating the possibility of using a new photographic system which can be used in obtaining a reproduction with the portrait effect. The Commission also plans to contact the family of Doctor Sutton in order to find out if an original portrait of the first President is available for sale.

This year, the KMA Annual Meeting will memorialize Hawkins Brown, M.D., who served as the Association's President in 1892.

Eugene H. Conner, M.D., Chairman

This report was reviewed by the Board of Trustees on August 3, 1972.

BOARD ACTION: Approved, with the notation that a portrait of Doctor Sutton has been received in the KMA Headquarters Office and is on display in the Board Room.

Recommendations, Reference Committee No. 6

Reference Committee No. 6 next reviewed the Report of the Memorials Commission. The committee recommends the acceptance of this report.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Orientation

The Committee on Orientation held one meeting during the past Associational year to plan the 1972 Orientation Program.

The Committee was originally appointed for the purpose of presenting an Orientation Program each year to acquaint new members with the many aspects of organized medicine. Over the years, the Committee has tried to present a program that would be both

interesting and beneficial to new physicians.

On March 16, the Committee on Orientation met and reviewed recommendations made by a special ad hoc committee of the Board of Trustees regarding this year's program. It was the opinion of the Committee that some changes in the format of the program were needed and, as a result, specific changes were recommended to the Board.

The Board, after considerable discussion regarding the effectiveness of the Orientation Program, recommended that the 1972 Orientation Program be presented on a voluntary basis and that future programs be discontinued. It was also recommended that this be referred to the Constitution and Bylaws Committee in order that the bylaws be changed to eliminate mandatory Orientation at the State level.

Alternate methods of Orientation were discussed by the Board to include the possibility of KMA staff members visiting new members and presenting them with an Orientation kit and at the same time urging them to attend the scientific sessions and the House of Delegates meetings at the Annual Meeting.

This report is presented to the House of Delegates for informational purposes only and additional recommendations concerning future Orientation Programs will be forthcoming from the Constitution and Bylaws Committee.

Wyatt Norvell, M.D., Chairman

Recommendations, Reference Committee No. 6

The Reference Committee next reviewed the Report of the Committee on Orientation. The Committee accepts the approval of this report.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Committee on Plans and Development

The Committee on Plans and Development had a single meeting on March 1, 1972, in Lexington, Kentucky, with good attendance.

The Committee directed its attention to the establishment of guidelines for experimental health care delivery systems and reiterated the previously formulated statements to wit: (1) must not violate medical ethics and must insure the privacy of the individual, (2) must be in an area where there is demonstrated need for the service purposed, (3) must be in the best interest of physicians and patients in a given area, (4) should demonstrate that the alternative method is superior to the one currently being used, (5) must improve the level of total health care at a reasonable cost.

The Committee enthusiastically encouraged physician participation on Comprehensive Health Planning Councils and suggested to the Board of Trustees that they urge physicians who are members of such Councils to continue to actively participate. This information was distributed through the KMA *Journal* and the *Communicator*. In addition, a letter was sent to each physician member serving on Comprehensive Health Planning Councils reaffirming the support and interest of the Kentucky Medical Association and urging their continued participation in and leadership of their local council.

The Committee discussed the possibility of having scientific sessions in conjunction with the Interim Meeting and it was our conclusion that this would require a great deal of work on the part of both physicians and staff as well as added expense and that the attendance would not merit such a program. The Committee urges the Kentucky Medical Association to continue its efforts in developing a good scientific program for the Annual Meeting and not dilute its efforts by trying to develop scientific sessions for the Interim Meeting.

The organizational structure of the Kentucky Medical Association was discussed, and it is the recommendation of this Committee that committee meetings be held in conjunction with the Interim Meeting when participants would more likely be available. That recommendation has been referred to the Executive Committee for further study.

The Committee members were asked to review the 1972 final reports to the House of Delegates to determine the productiveness of committees with an eye towards change of organizational structure if so indicated.

The time of reference committee meetings at the Annual Meeting was discussed, and the problem was not resolved. Having the reference committee meetings prior to the start of the main scientific program means that many people are not available who might wish to testify. Contrariwise, having the reference committee meetings during the scientific sessions has the effect of diluting the attendance at the scientific meetings.

The staff was asked to determine, by communication with the American Medical Association, how other state medical societies conduct their business and what their committee structure is. Along with this a brief discussion was held regarding the role and responsibilities of the President of the Kentucky Medical Association and length of term of his office. This matter was held over to the next meeting of the Committee on Plans and Development.

The Chairman would like to thank the participants of this Committee for their attendance and active role in arriving at the conclusions of the Committee.

Richard B. McElvein, M.D., Chairman

Recommendations, Reference Committee No. 6

Reference Committee No. 6 considered the Report of the Committee on Plans and Development with the exception of Paragraph 5 on Page 53. The committee recommends that this report be accepted as filed.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Report of the Chairman, Board of Trustees Paragraph relating to the Building Committee and Paragraph relating to the Ad Hoc Committee on Orientation

A major thrust of activity and accomplishment must rest with the Building Committee which saw our new Headquarters Office addition through to a successful completion. I do want to mention the members of this committee: George Brockman, M.D., Greenville, Chairman; Lewis Bosworth, M.D., Lexington; and Hoyt Gardner, M.D., Louisville. They worked long and hard, and you may also recall that these same men constituted the Building Committee when we erected our original building 10 years ago. The fruits of their efforts should be a source of pride for all of us. As you may know by now, the addition itself is larger than our original building was when it was completed in 1962. It would be well worth your time to visit your Headquarters Office and see some of the dividends of your investment.

Our Ad Hoc Committee on Orientation was charged with suggesting new ideas to the Orientation Committee regarding the Orientation Program. Last December, this Committee met and presented to the Orientation Committee a number of recommended changes in this year's program and submitted to them for their consideration the adoption of a standardized membership application form. These recommendations were reviewed by the Orientation Committee at their March 16 meeting and submitted to the Board. Your Board of Trustees has recommended that the Orientation Program, as a mandatory membership requirement, be deleted from the Bylaws and suggested that personal visits from staff, orientation kits and communication from our officers might be tried as a replacement to the Orientation Program. This is presented as an informational item as your action on this matter will be taken on the report of the Constitution and Bylaws Committee.

Recommendations, Reference Committee No. 6

Reference Committee No. 6 next reviewed portions of the Report of the Chairman of the Board of Trustees. This committee recommends the acceptance of these sections of this report.

Mr. Speaker, I move the adoption of this section of the report.

(Motion was seconded and carried.)

Mr. Speaker, I move the adoption of the Report of Reference Committee No. 6 as a whole as amended.

(Motion was seconded and carried.)

Mr. Speaker, I would like to thank the members of Reference Committee No. 6 and Mr. Gaines Davis, Jr., for his assistance in the wording of the Constitution and Bylaws Report and to our secretary, Mrs. Dianna Wallace.

REFERENCE COMMITTEE NO. 6

Glenn W. Bryant, M.D., Louisville, Chairman
Emanuel H. Rader, M.D., Pineville
Arthur B. Richards, M.D., Louisa
Robert E. Smith, M.D., Covington
Raymond D. Wells, M.D., Inez

SPECIAL REFERENCE COMMITTEE ON RESOLUTION H

W. Neville Caudill, M.D.
Louisville, Chairman

The Special Reference Committee on Resolution H considered the following resolution:

Resolution H—Reconsideration of Resolution H of 1971 (KMA Board of Trustees)

Resolution H (1972)

KMA Board of Trustees

WHEREAS, Resolution H was introduced by the Nelson County Medical Society to the 1971 House of Delegates, and adopted, and

WHEREAS, the Board of Trustees has had considerable difficulty in resolving this matter, and

WHEREAS, the Board of Trustees has implemented this resolution as well as it could understand it; therefore be it

RESOLVED, that this resolution be resubmitted to the 1972 House of Delegates by the Board of Trustees for further consideration and direction.

Resolution H (1971)

Nelson County Medical Society

WHEREAS, there now exists a different payment plan for doctors by third party carriers based upon economic and geographical location, and

WHEREAS, payment should be based upon service and ability and not upon geographical and economic location, and

WHEREAS, the cost of living and carrying on the practice of medicine is not materially different throughout the state, and

WHEREAS, the difference in payments prejudices doctors from going into the areas where they are needed because of lower remuneration, and

WHEREAS, even if a doctor charges less in a given area through custom he ought to have *a right to charge* the same as his peers throughout the State, therefore be it

RESOLVED, that the Kentucky Medical Association not only urge all third party carriers but use every means at its disposal to bring about an equitable payment plan for all doctors in the State, be it further

RESOLVED, that such a plan be based on service and not on geographical or economic location.

(*Resolution H is being referred back to the House*

of Delegates by the Board of Trustees for its reconsideration in the light of action taken in the past year toward its implementation.)

Recommendations, Special Reference Committee on Resolution H

The Special Reference Committee on Resolution H met and heard extensive testimony from all interested parties concerning Resolution H and its implementation by the Board of Trustees.

It was the feeling of the Reference Committee that the majority report submitted by the Ad Hoc Committee on Resolution H was generally acceptable as the means of implementation of this resolution.

The Reference Committee recommends that Resolution H be amended by the insertion of "legal" between "every" and "means" in the first RESOLVED section.

The Committee further recommends that implementation of Resolution H should take the form of a statement by the Board of Trustees requesting third party carriers to consider development of a fee system applying the UCR principle on the basis of the State as a whole and urging carriers in the development of new programs to consider the State as a whole.

Mr. Speaker, I move the adoption and implementation of this report of the Special Reference Committee on Resolution H as a whole.

(Motion was seconded and carried.)

Mr. Speaker, I want to thank Doctors Leslie Blakey, Kenneth Eblen, Lowell Martin and Robert Robbins for their patient attendance and astute help in the preparation of this report. I also wish to thank Linda O'Daniel.

(Motion was seconded and carried.)

SPECIAL REFERENCE COMMITTEE ON RESOLUTION H

W. Neville Caudill, M.D., Louisville, Chairman
Leslie W. Blakey, M.D., Lexington
Kenneth M. Eblen, M.D., Henderson
Lowell D. Martin, M.D., Martin
Robert E. Robbins, M.D., Elizabethtown

Following the reports of all reference committees, Doctor Walter Johnson of McCracken County was recognized to present the following resolution of appreciation to the Speaker and Vice Speaker of the House:

"WHEREAS, this has been a most difficult session of the House of Delegates for our Speaker, Richard F. Greathouse, M.D., and our Vice-Speaker, Carl Cooper, Jr., M.D., because of recurring parliamentary problems; therefore be it

RESOLVED, that the House of Delegates of this session of 1972 go on record giving them a vote of thanks for a job well done and extend our best wishes for the years ahead."

This resolution was passed by the House.

Unfinished Business

Doctor Greathouse recognized David A. Hull, M.D., Chairman of the Board of Trustees, for the final report of the Board which read as follows:

The KMA Bylaws provide that the Judicial Council be composed of five members. Four of these members to be elected by the House of Delegates with terms staggered so that one member will be elected each year. The KMA Secretary, who is elected by the House, automatically serves as a member of the Council.

According to the Bylaws, Chapter VII, Section 1, "to be eligible for membership on the Judicial Council, a nominee shall possess at least one of the following qualifications: (1) Have served one term as an officer, trustee, or as Delegate to the AMA, or (2) Have served five years as a member of the House of Delegates."

The Bylaws provide that the Board of Trustees shall nominate at least one candidate for each vacancy and that additional nominations may be made from the floor.

The term of J. Duffy Hancock, M.D., Louisville, expires with this meeting. The Board of Trustees has unanimously voted to nominate George A. Sehlinger, M.D., Louisville, to serve a four-year term on the Council.

Doctor Hull moved the adoption of this report. The motion was seconded and carried.

Election of Officers

Vice-Speaker Cooper called on Harold L. Bushey, M.D., Barbourville, Chairman of the Nominating Committee for his report. Doctor Bushey read the following list of nominations for the positions noted:

President-Elect (Eastern)	Fred C. Rainey, M.D. Elizabethtown
Vice-President (Central)	James B. Holloway, M.D. Lexington
Secretary	S. Randolph Scheen, M.D. Louisville
Treasurer	Keith P. Smith, M.D. Corbin
AMA Delegate	J. Thomas Giannini, M.D. Louisville
AMA Alternate Delegate	Charles G. Bryant, M.D. Louisville

It was necessary that two new AMA alternate delegates be elected to replace Doctor Rainey, nominated for President-Elect, and W. Donald Janney, M.D., Covington, who resigned. The names of Thomas L. Heavern, Jr.,

M.D., Highland Heights, and William W. Hall, M.D., Owensboro, were nominated from the floor. As no additional nominations were received for any other office, it was moved and seconded that the nominees be elected. Motion carried.

Doctor Rainey, the President-Elect, was escorted to the podium and received a standing ovation.

Doctor Bushey submitted the following nominations for the office of trustee and alternate trustee on behalf of the various district nominating committees:

Fifth District	Edward N. Maxwell, M.D. Louisville
Alternate	Lloyd G. Yopp, M.D. Louisville
Sixth District	Paul J. Parks, M.D. Bowling Green
Alternate	Carlisle V. Dodson, M.D. Russellville
Eighth District	Carl J. Brueggemann, M.D. Covington
Alternate	Robert C. Smith, M.D. Covington
Eleventh District	Earl B. Rynerson, M.D. Winchester
Alternate	Joe M. Bush, M.D. Mt. Sterling
Fifteenth District	Harold L. Bushey, M.D. Barbourville
Alternate	Walter H. Stepchuck, M.D. Harlan

There being no additional nominations from the floor, the above-named nominees were elected.

Nominations for Kentucky Physicians Mutual, Inc., Board of Directors

The following list of nominees for the Board of Directors, Kentucky Physicians Mutual, Inc., was submitted and received for information only:

Alan M. Bornstein, M.D., Louisville
John Dickinson, M.D., Glasgow
Hoyt D. Gardner, M.D., Louisville
Richard F. Grise, M.D., Bowling Green
William W. Hall, M.D., Owensboro
David A. Hull, M.D., Lexington
Wyatt Norvell, M.D., New Castle
Richard J. Rust, M.D., Newport
Keith P. Smith, M.D., Corbin
Garnett J. Sweeney, M.D., Liberty
Loman Trover, M.D., Madisonville

Election of 1973 Nominating Committee

The following physicians were elected by House of Delegates to serve as the Nominating Committee for the 1973 Annual Meeting:

William E. Becknell, M.D., Manchester
Glenn W. Bryant, M.D., Louisville
William J. Sandman, Jr., M.D., Louisville
John E. Trevey, M.D., Lexington
James O. Willoughby, M.D., Bowling Green

At this time, Doctor Cooper called Doctor Hess to the podium to make a few brief remarks as the new President.

Doctor Scheen announced that the Board of Trustees would hold its reorganizational meeting on Thursday, at noon, in the Tack Room on the 12th floor of Stouffer's Louisville Inn and urged the newly elected Board members to attend.

Vice-Speaker Cooper adjourned the second session of the 1972 KMA House of Delegates at 11:50 p.m. and thanked the members for their participation.

The next report is not an official part of the 1972 House of Delegates Proceedings but is presented here for your information.

Report of the Ad Hoc Committee to Study Judicial Council Matters

Members of the 1972 KMA House of Delegates spent considerable time discussing the report of the KMA Judicial Council, reversed one of its rulings and returned seven other rulings for further consideration and/or clarification. It became apparent that an appeal mechanism needed to be spelled out for members of the Association when they have feelings contrary to the opinions of the Judicial Council.

An Ad Hoc Committee was appointed by the Executive Committee at the direction of the House of Delegates "to study the function of the Judicial Council with reference to the changes in the Bylaws in order to provide for prompt appeal for decisions from the Judicial Council, with a reasonable amount of independence from the Judicial Council, but with the House of Delegates being the final appeal authority."

This Committee and its special guests held a lengthy discussion at its meeting on October 23

and felt that the following problems must be dealt with to arrive at an appropriate solution.

(1) The right of appealing a Judicial Council ruling seemed to be a major problem. While the right of appeal was approved in the Medical Discipline Committee's report of 1964, it was not expressed in the Bylaws of the Association.

(2) In addition to an appeal, it was felt that the House of Delegates should have the final authority of accepting or rejecting rulings from the Judicial Council but should not have the authority to modify rulings. It was the apparent feeling of the group that the eight rulings listed in the Judicial Council Report were not, in themselves, the real problem, but rather that it was a question of the "source of policy" within the Association which initiated the discussion.

(3) There was a general consensus that had more background information been presented concerning the rulings in this year's report (as was presented at this meeting), much of the misunderstanding would not have existed and the magnitude of the problem would have been diminished.

(4) It was felt by those in attendance that emotions and lack of understanding played a great part in the actions of the House of Delegates and that as things settle down, solutions should come without too much difficulty.

(5) Inaccurate and unsubstantiated statements on the floor of the House of Delegates contributed significantly to the discussion and the misunderstandings and led the House to take actions which may not have been in the best interest of the Association. Example: The statement that rulings of the AMA Judicial Council could be modified by the AMA House of Delegates. This statement is inaccurate.

(6) It was felt that some delegates feel that decisions have been made by the Judicial Council that affect all KMA members, and the members had not had a voice in these decisions (no hearings, etc.) or input on specific subjects under discussion. (In other words, the Judicial Council rulings have been too specific leaving no room for interpretation.)

(7) It was felt that members of the House of Delegates had been delinquent in their responsibility in not appearing before the Reference Committee to air their opinions instead of doing so on the floor of the House of Delegates.

(8) Some expressed a feeling that the rulings in the Judicial Council report were poorly phrased and the final consensus emphasized that the main problems were no appeal mechanism, a lack of appropriate procedure spelled out for the House of Delegates, and insufficient information provided with the Judicial Council Report.

The Committee members then held lengthy deliberations concerning these problems and appropriate motions were made for submission to the Executive Committee, Board of Trustees and the House of Delegates to hopefully assure the smooth and efficient operation of the Judicial Council.

The recommendations of the committee were as follows:

(1) That the Bylaws of KMA be amended to authorize an appeal mechanism and the wording might read in Chapter VII, Section 7 of the Bylaws as follows: *"No report or opinion of the Council shall be considered policy by the Association until approved by the House of Delegates. Any report or opinion of the Judicial Council submitted to the House of Delegates may be accepted or rejected but not modified by the House of Delegates."*

(2) That appropriate wording also be inserted in the Bylaws which would inform members that there is an appeal from the KMA Judicial Council to the AMA Judicial Council when a KMA member is also a member of the AMA and the KMA Judicial Council has made a ruling on that specific individual because of a complaint submitted or for any other reason.

(3) With the adoption of the above Bylaws changes, another Bylaws change would be necessary to delete the change adopted by the House in September, 1972, which gives the House the power to modify rulings of the Judicial Council.

It was noted that with the adoption of number one above that if a report is accepted, a policy is established. If a report is rejected, no policy exists on that particular subject and it can then be referred back to the Judicial Council for restudy, the Council can restudy it without such a direction should it desire, or no further action would have to be taken whatsoever. It was further clarified that opinions and rulings of the Judicial Council become effective immediately upon adoption by the Council. Should it be desirable for such a ruling or opinion to become Association policy, it then must be submitted to the House of Delegates for action as may be indicated by the House.

In addition, the Committee members felt that in future Judicial Council reports it should be clearly stated whether a ruling is based on (a) moral principles or practices, (b) customs and usages of the profession, or (c) matters of policy not necessarily involving issues of morality. It was further agreed that there should be no specific discussion of Judicial Council cases on the floor of the House of Delegates.

Our Committee members were most pleased to have as their special guests a member of the AMA Judicial Council, Charles Smeltzer, M.D., of Knoxville, Tenn.; the AMA Judicial Council's Legal Secretary, Mr. Ed Holman of Chicago, in addition to our own Legal Counsel, Mr. Gaines Davis; along with KMA President, Lee C. Hess, M.D. and Board Chairman Robert N. McLeod, Jr., M.D.

This report is respectfully submitted for the information of the KMA membership.

Henry B. Asman, M.D., Louisville, Chairman
Carl Cooper, Jr., M.D., Bedford
James B. Holloway, M.D., Lexington
Nelson B. Rue, M.D., Bowling Green
S. Randolph Scheen, M.D., Louisville

1972 CONSTITUTION AND BYLAWS
OF THE
KENTUCKY MEDICAL ASSOCIATION

Revised September 20, 1972

CONSTITUTION

Article I.	Name of the Association
Article II.	Purpose of the Association
Article III.	Component Societies
Article IV.	Composition and Meetings of the Association
Article V.	Officers
Article VI.	House of Delegates
Article VII.	Districts, Sections and District Societies
Article VIII.	Board of Trustees
Article IX.	Funds and Expenses
Article X.	Referendum
Article XI.	The Seal
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Article I. Name of Association

The name and title of this organization shall be the Kentucky Medical Association.

Article II. Purpose of the Association

The purpose of the Association shall be to federate and bring into compact organization the entire medical profession of the State of Kentucky and to unite with similar associations in other states to form the American Medical Association, with a view to the extension of medical knowledge; the advancement of medical science and charity; the evaluation of the standards of medical education; the enactment and enforcement of just medical laws; the promotion of friendly intercourse among physicians and the guarding and fostering of their material interests; the protection of the members thereof against unjust assaults upon their professional care, skill or integrity; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

Article III. Component Societies

Component societies shall consist of those medical societies which hold charters from this Association.

Article IV. Composition and Meetings of the Association

The Association shall consist of the members of the component societies, but the House of Delegates shall have authority to adopt such bylaws regulating the admission and classification of members as it may deem advisable. The Association shall hold an Annual Meeting and such Special Meetings as may be called pursuant to the bylaws.

Article V. Officers

Section 1. The officers of this Association shall be a President, a President-elect, a Vice President, a Secretary, a Treasurer, a Speaker and Vice Speaker of the House of Delegates, a Trustee and an Alternate Trustee from each district that may be established; and such other officers as may be provided for in the Bylaws.

Section 2. The eligibility, duties and terms of office of all officers of the Association shall be as prescribed in the Bylaws.

Section 3. All officers shall serve until their successors have been elected and installed.

Section 4. All officers shall be elected by the House of Delegates at its Regular Session and shall take office on the last day of the Annual Meeting.

Article VI. House of Delegates

Section 1. The House of Delegates shall be the legislative body of the Association and shall have power, by a two-thirds vote of all the delegates present at that session, to adopt bylaws to carry out the provisions of this Constitution and to provide for the government of the Association in any other manner not inconsistent with this Constitution. It shall meet in Regular Session annually during the Annual Meeting of the Association, and may be called into Special Session under such conditions as may be prescribed in the bylaws.

Section 2. Delegates shall be members of and elected by component societies in such manner as may be provided in the bylaws. Officers of the Association, Delegates and Alternate Delegates to the American Medical Association, and the five immediate Past Presidents shall be ex officio members of the House of Delegates and entitled to vote.

Section 3. The House of Delegates shall elect a Speaker and a Vice-Speaker, one of whom shall preside during the meetings of the House of Delegates. The presiding officer shall not be entitled to a vote except in the event of a tie.

Section 4. The House of Delegates shall be the final judge as to the qualification of its members.

Article VII. Districts, Sections and District Societies

The House of Delegates shall divide the state into Districts composed of one or more counties, for administrative purposes. It may also provide for a division of the scientific work of the Association into appropriate Sections, and for the organization of such District Societies, composed exclusively of members of component societies, as will promote the best interests of the profession.

Article VIII. Board of Trustees

The House of Delegates shall make provision in the bylaws for a Board of Trustees composed of one Trustee from each District and such of the other officers of the Association as the House may deem

appropriate, which shall be charged with the general direction of the Association's affairs during the interim between meetings of the House. The House may delegate such powers to the Board of Trustees as are not specifically required by this Constitution to be exercised by the House, and may limit the Board's powers to such extent as it may determine to be necessary or desirable, provided, however, that in no event shall the Board of Trustees have power to commit the Association to any course of action which is contrary to or at variance with any policy established by the House of Delegates.

Article IX. Funds and Expenses

The House of Delegates shall provide funds for meeting the expenses of the Association by such methods and from such sources as it may select. Funds may be appropriated by the House of Delegates to defray the expenses of the annual session, for publications, and for such other purposes as will promote the welfare of the Association and the profession.

Article X. Referendum

The membership of the Association, by written petition signed by not less than 10% of the active membership, may obtain a referendum on any question pending before the House of Delegates. The Secretary, upon the presentation of such a petition to him shall cause the question to be submitted to the active membership by mail, and if a majority of the active members shall signify its approval or disapproval of a certain policy or course of action with respect to the question thus submitted, the will of the majority shall determine the question and shall be binding upon the House of Delegates and the Association upon certification of the result of the vote by the Secretary to the President and Board of Trustees.

Article XI. The Seal

The Association shall have a common Seal with power to break, change or renew the same at pleasure.

Article XII. Amendments

The House of Delegates may amend any article of this Constitution by a two-thirds vote of the delegates registered at the Regular Session, provided that such amendment shall have been presented in open meeting at the previous regular session, and that it shall have been sent officially to each component county society at least two months before the session at which final action is to be taken.

Article XIII. Definitions

Whenever used in this Constitution, the Articles of Incorporation or the Bylaws—

(a) "County society," "component county society," or "component medical society" means "component society."

(b) "Annual Meeting" means the annual three-day meeting of the Association.

(c) "Scientific Sessions" mean those sessions during the Annual Meeting at which scientific subjects are programmed and discussed.

(d) "Regular Session" means the regular session of the House of Delegates which is held during the Annual Meeting.

(e) "Special Session" means a special, called meeting or session of the House of Delegates.

BYLAWS

Chapter I. Membership
Chapter II. Annual and Special Meetings of the Association
Chapter III. The House of Delegates
Chapter IV. Election of Officers
Chapter V. Duties of Officers
Chapter VI. Board of Trustees
Chapter VII. Discipline—The Judicial Council
Chapter VIII. Standing Committees and Councils
Chapter IX. Assessments and Expenditures
Chapter X. Rules of Conduct
Chapter XI. Rules of Order
Chapter XII. County Societies
Chapter XIII. Amendments

CHAPTER I. MEMBERSHIP

Section 1. Membership in this Association shall be coterminous with membership in a component county society. No physician shall be eligible for membership in this Association unless he is a member, in good standing of a component society, nor may he maintain membership in a component county society unless he is a member, in good standing of this Association.

When a physician who meets the qualifications hereinafter set forth, is certified to the Secretary as a member in good standing of a component society, properly classified as to type of membership, and when the dues pertaining to his membership classification have been received by the Secretary of the Association, the name of the member shall be included in the official roster of the Association and he shall be entitled to all the privileges of his class of membership. Provided, however, that members in good standing from other state societies may, if admitted to membership by a component society, be accepted by KMA for membership without paying dues for the remainder of the calendar year in which the transfer is made. Provided further, that the Board of Trustees shall have power, upon written application, approved annually by the county society of which the applicant is a member, to excuse any member from the payment of dues because of financial hardship. And provided further, that the Judicial Council, after a hearing, shall have power to condition membership in this Association upon the physician's agreement to limit the scope of his practice in any manner reasonably calculated to protect the public from the adverse effects of any demonstrated frailty or disability of said member.

Section 2. Membership in the Association shall be divided into nine classes, to-wit: Active, Emeritus, In-Training, Associate, Inactive, Student, Service, Honorary and Special.

(a) Active Members. The active membership of the Association shall consist of the active members of the various component medical societies. To be eligible for active membership in any component society, the applicant must be a physician who holds an unrestricted or limited license to practice medicine and surgery in this state, and who is of good moral, ethical and professional standing. Nothing contained herein shall prevent a component society from requiring new members to occupy provisional status for a reasonable time after their admittance to membership under any classification.

(b) Emeritus Members. Component societies may elect as a member-emeritus any doctor of medicine or osteopathy who has served his profession with distinction and who has either reached the age of 70 or has retired from active practice. Emeritus members shall have the right to vote and be entitled to the benefits of Chapter VI, Section 8 of these Bylaws, but shall not pay dues. They shall receive *The Journal* and other publications of the Association.

(c) In-Training Members. Interns, residents, and teaching fellows who are doctors of medicine or osteopathy and who have complied with all pertinent regulations of the State Board of Health. In-training members shall have the right to vote and receive all publications of the Association, but shall not be counted in determining the number of delegates to which their county society is entitled in the House of Delegates.

(d) Associate Members. The associate membership of the Association shall consist of the associate members of the various component medical societies. To be eligible for associate membership in any component society, the applicant must qualify under one or more of the following groups:

(1) Medical officers of the United States Army, Navy, Air Force, Veterans Administration, Public Health Service, or other federal governmental service while on duty in the State.

(2) Osteopathic physicians who practice allopathic medicine.

Associate members shall not have the right to vote nor to hold office, but shall receive the Journal and other publications of the Association.

(e) Inactive Members. The inactive membership of the Association shall consist of the inactive members of the various component county societies. Any doctor of medicine licensed to practice medicine in Kentucky who is not engaged in the practice of medicine but who is otherwise eligible for active membership in the Association may be admitted to inactive membership by any component county society. Inactive members shall not have the right to vote nor hold office, but shall receive the Journal and other publications of the Association.

(f) Student Members. Any student in an accredited medical school in Kentucky or any resident of Kentucky who is a student in any accredited medical school in the United States shall be eligible for student membership. Student members shall not have the right to vote nor hold office. They may apply directly to the State Association for membership and be assigned to the county society of their choice. The membership year for student members shall run from September 1 to August 31 of each year.

(g) Service Members. Members of the Association in good standing who enter military service and are ineligible for Associate membership shall be classified as service members. Service Members shall not be required to pay dues. If a member in good standing enters service prior to April 1 and has paid his dues for that year, he shall receive all publications and other benefits applicable to his class of membership in the Association and shall owe no further dues until January 1 following his release. If a member in good standing enters service prior to April 1 without paying his dues for that year, he shall receive publications and other benefits but shall owe the dues applicable to his class of membership immediately following his release from active duty. Members whose dues have not been received by April 1 are not in good standing.

(h) Honorary Members. Any physician possessed of scientific attainments who is a member of a constituent state medical association and who has participated in the program of the scientific session and who is not a citizen of Kentucky may by unanimous vote of the House of Delegates be elected to honorary membership. Honorary members shall be entitled to the privileges of the floor in all scientific sessions.

(i) Special Members. Component societies may invite dentists, pharmacists, funeral directors, or other professional persons to become special members. Special members shall have no rights or obligations under these Bylaws, but may be accorded the privilege of attending and participating in the scientific meetings of the society, provided, however, that a registration fee may be required of special members who desire to attend the Annual Meeting of the Association.

Section 3. Guests of Honor. Any distinguished physician not a resident of this State may become a guest of honor during any Annual Meeting upon invitation of the Board of Trustees and shall be accorded the privilege of participating in all of the scientific work of that meeting.

Section 4. No person who is finally convicted of a felony subsequent to September 26, 1968, shall be eligible for membership in this Association unless and until, upon proper application to the Judicial Council, it is determined that he is morally and ethically qualified. Except as provided in Chapter VII, Section 4 of these Bylaws, no person who is under sentence of suspension or expulsion from any component society of this Association shall be entitled to any of the rights or benefits of membership of this Association.

CHAPTER II. ANNUAL AND SPECIAL MEETINGS OF THE ASSOCIATION

Section 1. The Association shall hold its annual and special meetings at such times and places as may be determined by the House of Delegates.

Section 2. The Annual Meeting shall consist of one or more scientific sessions, at least two meetings of the House of Delegates, and such other gatherings as may be authorized by the Board of Trustees. Each scientific session shall be presided over by the President or in his absence or disability or at his request by the President-Elect or such officers as the Board of Trustees may direct. The entire time of the scientific sessions, as far as may be, shall be devoted to papers and discussions related to scientific medicine.

Section 3. The name of a physician upon the properly certified roster of members or list of delegates of a component society which has paid its annual assessment, shall be prima facie evidence of his right to register at any meeting of this Association.

Section 4. Each member in attendance at any meeting shall register indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of the society, he shall receive a badge which shall be evidence of his right to all privileges of membership at that meeting. No member or delegate shall take part in any of the proceedings of any meeting until he has complied with the provisions of this section.

CHAPTER III. THE HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet in Regular Session at the time and place of the Annual Meeting, and shall, insofar as is practicable, fix its hours of meeting so as to give delegates an opportunity to attend the scientific sessions and other proceedings. Provided, however, that if the business interests of the Association and profession require, the Speaker, with the consent of the Board of Trustees, may convene the Regular Session in advance of the Annual Meeting, and the House may remain in session after the final adjournment thereof.

Section 2. The House may be called into Special Session by the President with the approval of the Board of Trustees, and a special session shall be called by the President on the written request of delegates representing fifty or more component societies. The purpose of all special sessions shall be stated in the call, and all business transacted at any such special session shall be germane to the stated purpose.

Section 3. When a special session is called, the Secretary shall mail a notice of the time, place, and purpose of such meeting to the last known address of each delegate at least ten days before such session.

Section 4. The Speaker shall, by virtue of his office, be responsible for making all arrangements for all sessions, regular or special, of the House.

Section 5. The members of the House of Delegates shall be elected by the various component societies in the manner prescribed in Chapter XII of these Bylaws.

Section 6. In the event a component society is not represented at any meeting of the House, the Speaker shall consult with any officer of the component society who is in attendance and, with the approval of the Credentials Committee, may appoint any active member of such component society who is in attendance, as its alternate delegate. If no officer of such society is present, the Speaker may make the appointment without consultation, but with the approval of the Credentials Committee. All such appointments shall also be subject to the approval of the House.

Section 7. Forty per cent of the qualified delegates, as defined by Article VI of the Constitution, shall constitute a quorum and all of the meetings of the House shall be open to the members of the Association. The House shall have the right to go into executive session whenever in its judgment such action is indicated; except that active members of the Association shall have the right to attend all executive sessions.

Section 8. Each resolution introduced into the House shall be in writing and signed by the author and presented to the Secretary following its introduction. If the author be an individual member, it shall be signed by him. If the author be a group of members, it shall be signed by the authorized spokesman for that group. Immediately after the Delegate has introduced the Resolution, it shall be referred to the proper Reference Committee before action thereon is taken.

Section 9. No resolution shall be introduced in the first meeting of the House of Delegates by any member or group of members other than the Board of Trustees unless a copy thereof was furnished to the Headquarters Office at least seven days prior to its introduction. The only exception to this shall be that a resolution which has been signed by ten or more members of the House of Delegates and of which there are sufficient printed copies to distribute to each member of the House of Delegates may be received for consideration by an affirmative vote of three-fourths of the members present and voting. No new business shall be introduced in the last meeting of the House without unanimous consent, except when presented by the Board of Trustees. All new business so presented shall require the affirmative vote of three-fourths of those delegates present and voting, for adoption.

Section 10. The House shall give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each Annual Meeting a stepping stone to further ones of higher interest.

Section 11. It shall consider and advise as to the material interests of the profession, and of the public in those important matters wherein the public is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse information in relation thereto.

Section 12. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse between physicians of the same locality and shall continue these efforts until every physician in every county of the State who will agree to abide by the constitution, bylaws and other rules and regulations of the Association and the appropriate component society, has been brought under medical society influence.

Section 13. It shall encourage postgraduate work in medical centers as well as home study and research and shall endeavor to have the results of the same utilized and intelligently discussed in the county societies.

Section 14. It shall elect representatives to the House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

Section 15. It shall, upon application, provide and issue charters to county societies organized in conformity with the Constitution and Bylaws of this Association.

Section 16. The state shall be divided into the following districts:

No. 1—Ballard, Calloway, Carlisle, Fulton, Graves, Hickman, Livingston, McCracken, and Marshall.

No. 2—Daviess, Hancock, Henderson, McLean, Ohio, Union, and Webster.

No. 3—Caldwell, Christian, Crittenden, Hopkins, Lyon, Muhlenberg, Todd, and Trigg.

No. 4—Breckinridge, Bullitt, Grayson, Green, Hardin, Hart, Larue, Marion, Meade, Nelson, Taylor, and Washington.

No. 5—Jefferson.

No. 6—Adair, Allen, Barren, Butler, Cumberland, Edmonson, Logan, Metcalf, Monroe, Simpson, and Warren.

No. 7—Anderson, Carroll, Franklin, Gallatin, Grant, Henry, Oldham, Owen, Shelby, Spencer, and Trimble.

No. 8—Boone, Campbell, and Kenton.

No. 9—Bath, Bourbon, Bracken, Fleming, Harrison, Mason, Nicholas, Pendleton, Scott, and Robertson.

No. 10—Fayette, Jessamine, and Woodford.

No. 11—Clark, Estill, Jackson, Lee, Madison, Menifee, Montgomery, Owsley, Powell, and Wolfe.

No. 12—Boyle, Casey, Clinton, Garrard, Lincoln, McCreary, Mercer, Pulaski, Rockcastle, Russell, and Wayne.

No. 13—Boyd, Carter, Elliott, Greenup, Lawrence, Lewis, Morgan, and Rowan.

No. 14—Breathitt, Floyd, Johnson, Knott, Letcher, Magoffin, Martin, Perry, and Pike.

No. 15—Bell, Clay, Harlan, Knox, Laurel, Leslie, and Whitley.

District meetings may be held as desired, and District Medical Associations may be organized as desired, according to the districts outlined above.

Section 17. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates and such committees may report to the House of Delegates in person, and may participate in the debate thereon.

Section 18. Except as provided in Chapter VI, Section 4, it shall approve all memorials and resolutions issued in the name of the Association before the same shall become effective.

Section 19. A digest of proceedings of the House of Delegates shall be published and distributed to the membership annually.

CHAPTER IV. ELECTION OF OFFICERS AND DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION

Section 1. The President-Elect and the Vice President shall be elected for a term of one year, the President-Elect succeeding to the presidency at the expiration of his term as President-Elect. The Vice President shall be elected from the same general area in which the president resides. Delegates to the AMA and their alternates shall be elected for terms of two years. The Speaker of the House of Delegates, the Vice Speaker, the Secretary, and the Treasurer shall be elected for terms of three years, but no member shall be eligible for election to more than two consecutive full terms as Secretary or Treasurer. Trustees and their Alternates shall be elected for terms of three years and Trustees shall be limited to serving for not more than two consecutive full terms. The terms of the Trustees and their Alternates shall coincide and be so arranged that one-third of the terms expire each year, insofar as possible, provided, however, that nothing contained herein shall preclude an Alternate Trustee from serving two full terms as a Trustee. No member shall be eligible for the office of President, President-Elect, Vice President, Speaker or Vice Speaker of the House of Delegates, Trustee or Alternate Trustee who has not been an active member of the Association for at least five years.

Section 2. During the last meeting of the regular session of the House of Delegates, the Speaker of the House of Delegates shall submit to the members of the House of Delegates a list of ten names from which, by ballot, the House of Delegates shall select five members to serve as the Nominating Committee for the next year. The five names receiving the most votes shall form the committee. The committee shall select one of its members as chairman at an organization meeting held during the Interim Meeting, or at some other appropriate place designated by the Board of Trustees at least four months before the Annual Meeting. The committee, in addition to such other meetings as it may choose to hold, shall schedule an open meeting immediately after the close of the first meeting of the House at each Annual Meeting. This open meeting shall be held in the meeting place of the House of Delegates, shall receive broad publicity, and those who have business to discuss with the committee shall have a hearing. Before noon of the following day, the committee shall post on a bulletin board near the entrance to the hall in which the Annual Meeting is being held, its nominations for each office to be filled, and shall formally present said nominations to the House at the time of the election. Additional nominations may be made from the floor by submitting the nominations without discussion or comment. Vacancies occurring on the Nominating Committee by virtue of death, resignation, or disability, shall be filled by appointment of the Speaker.

Section 3. The election of officers and delegates to the AMA and their alternates shall be held at the second meeting of the regular session of the House of Delegates.

Section 4. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect, provided, however, that when there are more than two nominees, the nominee receiving the least number of votes on the first ballot shall be dropped and the balloting shall continue in like manner until an election occurs.

Section 5. Any member known to have directly or indirectly solicited votes for, or sought any office within the gift of the Association shall be ineligible for any office for two years.

Section 6. The Delegates representing the counties in each District form the Nominating Committee for the purpose of nominating a Trustee and an Alternate Trustee for the District concerned. This committee shall hold a well-publicized meeting open to all active members of the District concerned who are in attendance at the Annual Meeting for the purpose of discussing the nomination of the Trustee and his Alternate to serve the District. Additional nominations may be made from the floor when the Nominating Committee makes its report to the House of Delegates.

CHAPTER V. DUTIES OF OFFICERS OTHER THAN TRUSTEES AND ALTERNATES

Section 1. Except as provided in Chapter II, Section 2 hereof, the President shall preside at all scientific sessions of the Association and shall appoint all committees not otherwise provided for. He shall deliver an annual address at such time as may be arranged and shall perform such duties as custom and parliamentary usage may require. He shall be the real head of the profession in the State during his term of office and so far as practicable, shall visit or cause to be visited on his behalf, the various sections of the State and assist the Trustees in building up the county societies and in making their work more practical and useful. He shall be reimbursed for his reasonable and necessary travel expense incurred in the performance of his duties as President.

Section 2. The President-Elect shall assist the President in visitation of county and other meetings. He shall become president of the Association at the next Annual Meeting following his election as president-elect. In the event of his death or resignation, or if he becomes permanently disqualified or disabled, his successor shall be elected by the House of Delegates and shall be installed as President of the Association at its next regular session.

Section 3. The Vice President shall assist the President in the discharge of his duties, and shall perform such other duties as may be prescribed by the Board of Trustees. In the event of a vacancy in the office of the President, the Vice President shall succeed to the office of the President.

Section 4. The President-Elect and the Vice-President, when acting for and in behalf of the President, may be reimbursed for their reasonable and necessary travel expenses incurred in the performance of their duties in such amounts as may be available out of the sum appropriated in the annual budget for traveling expenses.

Section 5. The Speaker of the House shall preside at all meetings of the House of Delegates. He shall appoint all committees of the House of Delegates with the approval of the House of Delegates. He shall be a non-voting member of said committees, and shall perform such other duties as custom and parliamentary usage may require.

Section 6. The Vice Speaker shall assume the duties of the Speaker in his absence and shall assist the Speaker in the performance of his duties. In the event of the death, disability, resignation, or removal of the Speaker, the Vice Speaker shall automatically become Speaker of the House of Delegates.

Section 7. The Secretary shall advise the Executive Director in all secretarial matters of this Association and shall act as the corporate secretary insofar as the execution of official documents or institution of official actions are required. He shall perform such duties as are placed upon him by the Constitution and Bylaws.

Section 8. The Treasurer shall demand and receive all funds due the Association, including bequests and donations. He shall, if so directed by the House of Delegates, sell or lease any real estate belonging to the Association and execute the necessary papers and shall, subject to such direction, have the care and management of the fiscal affairs of the Association. All vouchers of the Association shall be signed by the Secretary or the Executive Director and shall be countersigned by the Treasurer of the Association. Under unusual circumstances, when one or more of the above-named officials are not readily available, the President or the Chairman of the Board of Trustees is authorized to sign the vouchers, provided that in any event all vouchers of the Association shall bear a signature and a counter-signature. All five officials shall be required to give bond in an amount to be determined by the Board of Trustees. The Treasurer shall report the operations of his office annually to the House of Delegates, via the Board of Trustees, and shall truly and accurately account for all funds belonging to the Association and coming into his hands during the year. His accounts shall be audited annually by a certified public accountant appointed by the Board of Trustees.

CHAPTER VI. BOARD OF TRUSTEES

Section 1. The Board of Trustees shall be the executive body of the House of Delegates and between sessions of the House of Delegates shall exercise the powers conferred upon the House of Delegates by the Constitution and Bylaws. The Board of Trustees shall consist of the duly elected Trustees and the President, the President-Elect, the Vice-President, the immediate Past-President, the Speaker, and Vice-Speaker of the House of Delegates, the Secretary, the Treasurer, and the Delegates to the American Medical Association. The Executive Committee of the Board of Trustees shall consist of the President, the Vice President, the President-Elect, the Secretary, the Chairman of the Board of Trustees, the Vice Chairman of the Board of Trustees, and two trustees to be elected annually by the Board of Trustees. A majority of the full Board, to-wit, 14, and a majority of the full Executive Committee, to-wit, 4, shall constitute a quorum for the transaction of all business by either body. Between sessions of the Board, the Executive Committee shall exercise all of the powers belonging to the Board except those powers specifically reserved by the Board to itself.

Section 2. The Board shall meet daily, or as required, during the Annual Meeting of the Association and at such other times as necessity may require, subject to the call of the Chairman or on petition of three Trustees. It shall meet on the last day of the Annual Meeting for reorganization and for the outlining of the work for the ensuing year. It shall, through its Chairman, make an annual report to the House of Delegates at such time as may be provided, which report shall include an audit of the accounts of the Treasurer and other agents of this Association and which shall also specify the character and cost of all the publications of the Association during the year, and the amounts of all other property belonging to the Association, or under its control, with such suggestions as it may deem necessary. By accepting or rejecting this report, the House may approve or disapprove the action of the Board of Trustees in whole or in part, with respect to any matter reported upon therein. In the event of a vacancy in any office other than that of President, the Board may fill the same until the annual election.

Section 3. Each Trustee shall be organizer, peacemaker and censor for his district. He shall hold at least one district meeting each year for the exchange of views on problems relating to organized medicine and for postgraduate scientific study. The necessary traveling expenses incurred by a Trustee in the line of his duties herein imposed may be paid by the Treasurer upon a proper itemized statement, but this shall not be construed to include his expenses in attending the Annual Meeting of the Association.

Section 4. The Board shall have the authority to communicate the views of the profession and of the Association in regard to health, sanitation, and other important matters, to the public and press.

Section 5. The Journal of the Kentucky Medical Association shall be the official organ of the Association and shall be published under the supervision of the Board. The Editor of the Journal shall be elected by the Board. All money received by the Journal or by any member of its staff on its behalf, shall be paid to the Treasurer on the first of each month. The Board shall provide for and superintend the publication and distribution of all proceedings, transactions, and memoirs of the Association, and shall have authority to appoint such assistants to the Editor as it deems necessary.

Section 6. All commercial exhibits during the Annual Meeting shall be within the control and direction of the Board

Section 7. In the event of the death, resignation, removal or disability of a Trustee, between sessions of the House of Delegates, the Alternate Trustee shall succeed to the office of Trustee. In case of disability, the Alternate shall serve until the disability

is removed or the Trustee's term expires, and in the absence of the Trustee, the Alternate Trustee shall vote in his place and stead.

Section 8. The Association, upon the request of any member in good standing who is a detendant in a professional liability suit, will provide such member with the consultative service of competent legal counsel selected by the Secretary acting under the general direction of the Executive Committee. In addition, the Association may, upon application to the Board outlining unusual circumstances justifying such action, provide such member with the services of an attorney selected by the Board to defend such suit through one court.

Section 9. The Board shall employ an Executive Director whose principal duty shall be to carry out and execute the policies established by the House of Delegates and the Board. His compensation shall be fixed by the Board. The Executive Director shall act as general administrative officer and business manager of the Association and shall perform all administrative duties necessary and proper to the general management of the Headquarters Office, except those duties which are specifically imposed by the Constitution and Bylaws upon the officers, committees, councils and other representatives of the Association. He shall refer to the various elected officials all administrative questions which are properly within their jurisdiction.

He shall attend the Annual Meeting, the meetings of the House of Delegates, the meetings of the Board, as many of the committee and council meetings as possible, and shall keep separately the records of their respective proceedings. He shall, at all times, hold himself in readiness to advise and aid, so far as is possible and practicable, all officers, committees, and councils of the Association in the performance of their duties and in the furtherance of the purposes of the Association. He shall be allowed traveling expenses to the extent approved by the Board.

He shall be the custodian of the general papers and records of the Association (including those of the Treasurer) and shall conduct the official correspondence of the Association. He shall notify all members of meetings, officers of their election, and committees and councils of their appointment and duties.

He shall account for and promptly turn over to the Treasurer all funds of the Association which come into his hands. It shall be his duty to receive all bills against the Association, to investigate their fairness and correctness, to prepare vouchers covering the same, and to forward them to the Treasurer for appropriate action. He shall keep an account with the component societies of the amounts of their assessments, collect the same, and promptly turn over the proceeds to the Treasurer. He shall, within thirty days preceding each Annual Meeting, submit his financial books and records to a certified public accountant, approved by the Board, whose report shall be submitted to the House of Delegates.

He shall keep a record of all physicians in the State by counties, noting on each his status in relation to his county society, and upon request shall transmit a copy of this list to the American Medical Association.

He shall act as Managing Editor, or otherwise supervise the publication of *The Journal of the Kentucky Medical Association* and such other publications as may be authorized by the House of Delegates, under the guidance and direction of the Board.

He shall perform such additional duties as may be required by the House of Delegates, the Board, or the President, and shall employ such assistants as the Board may direct. He shall serve at the pleasure of the Board, and in the event of his death, resignation, or removal, the Board shall have the power to fill the vacancy. From time to time, or as directed by the Board, he shall make written reports to the Board and House of Delegates concerning his activities and those of the Headquarters Office.

CHAPTER VII. DISCIPLINE — THE JUDICIAL COUNCIL

Section 1. There is hereby created a Judicial Council composed of the Secretary of the Association and four members to be elected by the House of Delegates for terms of four years each. One member shall be elected from each of the traditional eastern, western, and central districts, and one member from the state at large. Members of the first Judicial Council shall be elected for terms of one, two, three, and four years, respectively so that thereafter, one member will be elected each year. The Council shall annually elect a chairman.

To be eligible for membership on the Judicial Council, a nominee shall possess at least one of the following qualifications: (1) Have served one term as an officer, trustee, or as Delegate to the AMA or (2) Have served five years as a member of the House of Delegates.

It shall be the duty of the Board of Trustees to nominate at least one candidate for each vacancy on the Judicial Council, but additional nominations may be made from the floor. Vacancies which occur between Regular Sessions of the House of Delegates, shall be filled by the Board of Trustees. No member, other than the Secretary, shall serve more than two consecutive terms.

Section 2. The Judicial Council shall be the Board of Censors of the Association. It shall be the final arbiter of all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All charges of breach of medical ethics brought before the House of Delegates shall be referred to the Judicial Council without discussion. A member who has been convicted of a felony or of any violation of the Medical Practice Act, or who violates any of the provisions of the constitution, bylaws, or any rule or regulation of this Association, or the Principles of Ethics of the American Medical Association shall be liable to censure, fine, suspension, or expulsion upon order of the Judicial Council. Provided, however, that if in addition to discipline by the Association, the Judicial Council shall be of the opinion that the offending member's license to practice medicine should be revoked, it shall report this to the Board of Trustees as a recommendation that the Board refer the matter to the State Board of Licensure for this purpose.

Suspension shall be for a specified period during which the member shall remain liable for the payment of dues but shall not be eligible to hold office, attend business meetings or otherwise participate in Associational activities at the county, district or state levels. Upon the expiration of the period of suspension, every suspended member shall be automatically restored to all of the rights and privileges of his class of membership unless the Judicial Council determines that his conduct during the period of suspension indicates that he is unworthy of such restoration, in which event his suspension may be extended or he may be expelled.

Upon the complaint of any member or aggrieved individual involved, the Judicial Council may initiate disciplinary proceedings against any member, and may intervene in or supersede county, individual trustee, or

district disciplinary proceedings, whenever in its sole judgment and opinion, a disciplinary matter is not being handled in an expeditious manner, and may render a decision therein. In all cases in which the Association, rather than a member or aggrieved individual, appears to be the real party in interest, the Judicial Council may refer the complaint to the Board of Trustees for a determination as to whether probable cause for disciplinary action exists. If the Board of Trustees resolves this question in the affirmative, it shall so charge the respondent, and a representative of the Board shall thereupon be responsible for presenting the evidence in support of such charge at any hearing held thereon.

In all proceedings of the Judicial Council, the due process requirements of reasonable notice and a full and fair hearing shall be observed. No recommended disciplinary decision of an individual trustee or any district grievance committee shall become effective unless and until approved by the Judicial Council.

Section 3. It shall consider all appeals from the recommended decisions of individual trustees and District Grievance Committees. In the case of appeals from the decisions of individual trustees, the Judicial Council may admit such oral or written evidence as in its judgment will best and most fairly present the facts, but all appeals from the recommended decisions of District Grievance Committees shall be considered on the record made before such committee. It shall be the duty of the Secretary to notify the parties with respect to its disposition of each case.

Section 4. The Judicial Council may hear appeals from the disciplinary orders of component societies. Provided, however, that such appeals shall be considered on the record made before the component societies.

Section 5. Efforts toward conciliation and compromise shall precede the hearing of all disciplinary cases, but the decision of the Judicial Council shall be final.

Section 6. Component societies are encouraged to create suitable disciplinary procedures which guarantee due process, and to dispose of all disciplinary problems which come to their attention. It is recognized, however, that it may not be feasible for some societies to do so, and the District Grievance Committees hereinafter created, are designed to meet the needs of county societies which are without a functioning grievance committee.

Section 7. The trustee of each district is hereby designated the chairman of his District Grievance Committee. The Judicial Council shall designate two additional trustees from districts adjoining that of the chairman, and the three trustees thus selected shall constitute the District Grievance Committee. All grievances which cannot be resolved by individual trustees, shall be referred to the local grievance committee or the district grievance committee for the district in which the respondent physician or county society resides.

Section 8. District Grievance Committees shall investigate every grievance coming to their attention, taking care that the physician complained of shall have ample opportunity to respond to the complaint. If, after careful investigation, the complaint appears to be without merit, the committee shall so report to the Judicial Council, including sufficient facts in its report to enable the Judicial Council to form its own conclusions.

If the District Grievance Committee's investigation indicates that the member may be a proper subject of disciplinary action, the committee shall, upon reasonable notice, hold a hearing at which the complainant and the respondent shall be entitled to be represented by counsel, to present the testimony of witnesses in his behalf, and to cross-examine witnesses against him. All testimony shall be under oath and shall be recorded by a competent reporter at the expense of the Association. but shall not be transcribed unless and until an appeal is taken as hereinafter provided.

When all of the testimony has been heard and all evidence received, the committee shall make written findings and recomendations which it shall transmit to the Judicial Council, furnishing copies thereof to the parties.

Section 9. Any party aggrieved by the findings or recommendations of the committee, may, within 30 days, appeal to the Judicial Council. Appeals shall be taken by filing with the Secretary a copy of the entire record made before the District Grievance Committee (including a transcript of the testimony, procured at the appellant's expense) together with a written statement of appeal pointing out in detail wherein the committee has erred, and directing the attention of the Judicial Council to those portions of the transcript upon which he relies, provided, however, that the Judicial Council may extend the time in which the transcript must be filed. upon request made within the initial thirty-day period.

Section 10. The House of Delegates shall ratify or reject such interpretations of the principles of medical ethics as the Judicial Council may propose. The Council shall annually report to the House of Delegates any rulings that have universal application, and the House shall have the power to modify the prospective effect of such rulings as the circumstances dictate.

CHAPTER VIII. COMMITTEES AND COMMISSIONS

Section 1. The Board of Trustees shall have authority from time to time to appoint, fix the duties of, and abolish such standing committees and commissions as it deems necessary or desirable to assist it in carrying on the Association's activities in the fields of business and scientific meetings, medical education and hospitals, legislation, medical services, communications and public service, and governmental medical services.

Section 2. The Executive Committee shall serve as the nominating committee for all standing committee and commission appointments, but the trustees may make additional nominations. When the Executive Committee sits as such nominating committee, the President-Elect shall serve as Chairman.

Section 3. The President, with the advice and consent of the Chairman of the Board of Trustees, may appoint temporary, ad hoc committees to perform specified functions. All such committees shall expire at the end of the term of the President by whom appointed.

Section 4. No committee or commission shall have power or authority to fix or determine Associational policy or to commit the Association to any course of action, such powers being expressly reserved to the House of Delegates and the Board of Trustees.

CHAPTER IX. ASSESSMENTS AND EXPENDITURES

Section 1. The annual dues for membership in this Association shall be as follows: (1) Active Members $130, except that the dues for new members entering practice for the first time shall be $80 per year for the first three full years of practice; (2) Emeritus Members, no dues; (3) Associate

Members, $10; (4) In-Training Members, $10; (5) Inactive Members, $10; (6) Student Members, $1; (7) Service Members, no dues; (8) Special Members, no dues. Dues fixed by these Bylaws shall constitute assessments against the component societies. Unless otherwise instructed by the Board of Trustees (which may institute centralized billing) the Secretary of each component society shall forward its assessments together with its properly classified roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county to the Secretary of this Association as of the first day of January each year.

Section 2. Unless otherwise provided by the Board of Trustees pursuant to Section 1 hereof, any component society which fails to pay its assessments, or make the report as required, on or before the first day of April in each year, shall be held as suspended and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

Section 3. All motions and resolutions appropriating money shall specify a definite amount or so much thereof as may be necessary for the purpose, and must have prior approval of the Board of Trustees before they can become effective. No motion or resolution, the adoption of which would require a substantial expenditure of funds, shall be considered by the House of Delegates unless the funds have been budgeted or are provided by the motion or resolution.

CHAPTER X. RULES OF CONDUCT

The principles set forth in the Principles of Ethics of the American Medical Association, together with the Constitution and Bylaws of the Association and all duly adopted resolutions of the House of Delegates, shall govern the conduct of members in their relation to each other and to the public.

CHAPTER XI. RULES OF ORDER

The deliberations of this Association shall be governed by parliamentary usage as contained in the latest edition of Sturgis' Standard Code of Parliamentary Procedure, unless otherwise determined by a vote of its respective bodies.

CHAPTER XII. COUNTY SOCIETIES

Section 1. Except as provided in Section 3 of this Chapter, all county medical societies in this State which have adopted principles of organization not in conflict with this Constitution and Bylaws shall, upon application to the House of Delegates, receive a charter from and become a component part of this Association.

The House of Delegates shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and Bylaws.

Section 2. As rapidly as can be done after the adoption of this Constitution and Bylaws, a medical society shall be organized in every county in the state in which no component society exists, and charters shall be issued thereto.

Section 3. Only one component society shall be chartered in any county. Membership in the component society thus created shall entitle the members thereof to all the rights and benefits of membership in the Kentucky Medical Association.

Section 4. In sparsely settled sections two or more component societies may join for scientific programs, the election of officers, and such other matters as they may deem advisable. The component societies thus combined shall not lose any of their privileges or representation. The active members of each component society shall annually elect at least a Secretary and a Delegate for the transaction of its business with the Association.

Two or more adjacent component societies may also combine into one multi-county component society by adopting resolutions to that effect at special meetings called for that purpose on at least ten days' notice. Copies of the resolutions, certified as to their adoption by the Secretary of each society, shall be forwarded to the Headquarters Office. If approved by the Board of Trustees, the multi-county society shall thereupon be issued a charter, the consolidating county societies shall cease to exist and the multi-county society shall become a component society of this Association; provided, however, that the active members residing in each county comprising the multi-county society shall be entitled to elect a delegate or delegates to the House of Delegates, as if each such county constituted a component society within the meaning of Section 12 of this Chapter; and provided, further, that multi-county societies may elect, at large, one alternate delegate for each delegate to which it is entitled under this section and such alternate may serve in the absence of the delegate for whom he is the designated alternate.

Section 5. Each component society shall be the sole judge of the qualifications of its own members. All members of component societies shall be members of the Kentucky Medical Association and shall be classified in accordance with Chapter I, Section 2 of these Bylaws, provided, however, that no physician who is under suspension or who has been expelled shall thereafter, without reinstatement by the Board of Trustees be eligible for membership in any component society. Any physician who desires to become a member of the Kentucky Medical Association shall first apply to the component society in the county in which he resides, for membership therein. Except as hereinafter provided in Sections 6 and/or 8 of this chapter, no physician shall be an active member of a component society in any county other than the county in which he resides.

Section 6. Any physician who may feel aggrieved by the action of the component society of the county in which he resides, in refusing him membership, shall have the right to appeal to the Board of Trustees, which, upon a majority vote, may permit him to apply for membership in a component society in a county which is adjacent to the county in which he resides.

Section 7. When a member in good standing in a component society moves to another county in the State, his name, upon request, shall be transferred without cost to the roster of the component society into whose jurisdiction he moves, if he is admitted to membership therein.

Section 8. A physician whose residence is closer to the headquarters of an adjacent component society than it is to the headquarters of the component society of the county in which he resides, may, with the consent of the component society within whose jurisdiction he resides, hold membership in said adjacent component society.

Section 9. Each component society shall have general direction of the affairs of the profession in the county, and its influence shall be constantly exerted for bettering the scientific, moral and material conditions of every physician in the county. Systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Upon reasonable notice and after a hearing, component societies may discipline their members by censure, fine, suspension or expulsion, for any breach of the Principles of Medical Ethics or any bylaw,

rule or regulation lawfully adopted by such societies or this Association. At every hearing, the accused shall be entitled to be represented by counsel and to cross-examine witnesses, and the society shall cause a stenographic record to be made of the entire proceedings. The stenographer's notes need not be transcribed unless and until requested by the respondent member.

Any physician aggrieved by the disciplinary action of a component society may, within ninety (90) days, appeal to the Judicial Council, whose decision shall be final. This appeal shall be in writing and shall point out in detail the errors committed by the county society. It shall be accompanied by a transcript of the proceedings before the county society, procured at appellant's expense, and the statement of appeal shall direct the attention of the Judicial Council to those portions of the transcript upon which he relies.

Any member who fails or refuses to comply with the lawful disciplinary orders of his component society shall, if such failure or refusal continues for more than thirty (30) days, be automatically suspended from membership, provided, however, that an appeal shall stay the suspension until a final decision is made by the Judicial Council.

The resignation of a member against whom disciplinary charges are pending or who is in default of the disciplinary judgment of his county society, a district grievance committee or the Board of Trustees shall not be accepted and no member who is suspended or expelled may be reinstated or readmitted unless and until he complies with all lawful orders of his component society and the Board of Trustees.

Section 10. Frequent meetings shall be encouraged and the most attractive programs arranged that are possible. Members shall be especially encouraged to do postgraduate and original research work, and to give the society the first benefit of such labors. Official positions and other references shall be unstintingly given to such members.

Section 11. At the time of the annual election of officers, each component society shall elect a delegate or delegates to represent it in the House of Delegates. The term of a delegate shall commence on the first day of the regular session of the House following his election, and shall end on the day before the first day of the next regular session, provided, however, that component societies may elect delegates for more than one term at any election. Each component society may elect one delegate for each 25 voting members in good standing, plus one delegate for one or more voting members in excess of multiples of 25, provided, however that each component society shall be entitled to at least one delegate regardless of the number of voting members it may have and that each multi-county society shall be entitled to the same number of delegates as its component societies would have had. The secretary of the society shall send a list of such delegates to the Secretary of this Association not later than 45 days before the next Annual Meeting. It shall be the obligation of a component society which elects delegates to serve more than one year, to provide the KMA Headquarters Office with a certified list of its delegates each year.

Section 12. The secretary of each component society shall keep a roster of its members and a list of non-affiliated licensed physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. He shall furnish an official report containing such information upon blanks supplied him for the purpose, to the Secretary of the Association, on the first day of January of each year, or as soon thereafter as possible, and at the same time the dues accruing from the annual assessment are sent in. In keeping such roster the secretary shall note any change in the personnel of the profession by death or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

CHAPTER XIII. AMENDMENTS

These Bylaws may be amended at any session of the House of Delegates by a majority vote of all the delegates present at that session, after the amendment has laid on the table for one day, whereas any amendment proposed in a reference committee not having laid on the table for two days, requires a two-thirds vote.



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Continuing Educational Opportunities

From The

KMA Postgraduate Medical Education Office

Drug Co. Sponsors TV Program

The Burroughs Wellcome Company will sponsor a television show entitled "I Am Joe's Heart" to be aired on area television networks from January 5-10, 1973. Endorsed by the American Heart Association, this program is designed to inform the public personally and graphically about the heart, its function, its needs and the effects that various abuses have on it.

The following television stations will carry the program:

Cincinnati—Channel 9—WCPO—1/9/73—7:30 p.m.
Nashville—Channel 5—WLAC—1/8/73—6:30 p.m.
Memphis—Channel 3—WREC—1/7/73—6:30 p.m.
Huntington—Channel 13—WHTN—1/7/73—7:30 p.m.
St. Louis—Channel 5—KSD—1/10/73—6:30 p.m.
Louisville—Channel 3—WAVE—1/5/73—8:30 p.m.

IN KENTUCKY

DECEMBER

14 Norton Medical Seminar, "Current Management of Difficult Gastrointestinal Problems," 10:00 a.m., Norton Memorial Infirmary, Louisville

15-16 Postgraduate course, "Pediatric Ophthalmology," Jonathan Wirtschafter, M.D., Program Chairman, University of Kentucky Medical Center. Fee: $75 for practitioner and $10 for resident. Further information:
Frank R. Lemon, M.D., Associate Dean for Continuing Education, College of Medicine, University of Kentucky, Lexington, Kentucky 40506

20 Medical Lecture, "Rebuilding Hands," by Harold E. Kleinert, M.D., University of Louisville; Jewish Hospital, Louisville

FEBRUARY

11-17 Third Family Medicine Review, Frank R. Lemon, M.D., Program Chairman, University of Kentucky Medical Center. Registration Fee: $175. AAFP credit has been requested for 42 hours. Contact Doctor Lemon for further information.

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Gradie R. Rowntree, M.D., Louisville, (left) talks with Professor Enrico C. Vigliani, Italy, Secretary General, International Association on Occupational Health at the XVII International Congress on Occupational Medicine, September 17-23 in Buenos Aires.

Ky. M.D. Attends World Mtg. On Occupational Medicine

Gradie R. Rowntree, M.D., Louisville, attended the XVII International Congress on Occupational Medicine held in Buenos Aires, September 17-23. Doctor Rowntree is a member of the Permanent Commission of the Internal Association.

The purpose of the Congress is to provide an international basis for the prevention and treatment of accidents and diseases occurring among people who work. Legislation, standardization, technical cooperation and research in the participating countries is shared. The Association promotes the development of occupational medicine and seeks to establish links between experts in different countries.

Simultaneous interpretation was given at all sessions in five different languages at the 1972 Buenos Aires meeting. The next meeting of the organization will be in 1975 in Brighton, England.

KMGA Announces New Officers

Officers and Executive Committee members of the Kentucky Medical Golf Association have been announced as follows: Frederick P. Shepherd, M.D., Louisville, President; William J. Graul, M.D., Versailles, President-Elect; Russel H. Davis, M.D., Pikeville, 1st Vice-President; Ron Gobel, M.D., Louisville, 2nd Vice-President; John Karibo, M.D., Louisville, Secretary-Treasurer; and Executive Committee members, C. M. Blanton, M.D., Paducah; James Ford, M.D., Louisville; Glenn W. Bryant, M.D., Louisville; Robert Hall, M.D., Paintsville; Samuel O. Hodges, M.D., Lexington; George Tanner, M.D., Ft. Thomas, and Mervel V. Hanes, M.D., Louisville.

In an article in last month's issue of *The Journal of KMA,* the KMGA failed to announce the winners of Low Gross-Senior Division. They are Glenn W. Bryant, M.D., with a gross 80 and runner-up Martin Kaplan, M.D., with 82.



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THE

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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Nonobstructed urinary tract infections (mainly cystitis, pyelitis, pyelonephritis) due to susceptible organisms. **Important Note:** ***In vitro* sensitivity tests not always reliable; must be coordinated with bacteriological and clinical response. Add aminobenzoic acid to follow-up culture media. Increasing frequency of resistant organisms limits usefulness of antibacterial agents, especially in chronic and recurrent urinary infections.** Maximum safe total sulfonamide blood level, 20 mg/100 ml; measure levels as variations may occur.

Contraindications: Hypersensitivity to sulfonamides; infants less than 2 months of age; pregnancy at term and during the nursing period.

Warnings: Safety in pregnancy not established. Do not use for group A beta-hemolytic streptococcal infections, as sequelae (rheumatic fever, glomerulonephritis) are not prevented. Deaths reported from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias. Sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. CBC and urinalysis with careful microscopic examination should be performed frequently.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy or bronchial asthma. Hemolysis, frequently dose-related, may occur in glucose-6-phosphate dehydrogenase-deficient patients. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia; *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis; *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; *Miscellaneous reactions:* Drug fever, chills and toxic nephrosis with oliguria and anuria. Periarteritis nodosa and L.E. phenomenon have occurred. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

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(Continued on page 1041)

Should old depressives be forgot?

geriatric depressive.
Unable to concentrate he tends
ake little interest in the affairs
nd him. His reactions are slow
delayed. He speaks very little.
en he does, it's mostly to com-
n of his insomnia, fatigue, or
stipation.

One way of relieving depression in the geriatric patient is with Tofranil.

Please read the prescribing information for details of usage (lower dosages are recommended for elderly patients and adolescents), precautions, warnings, contraindications, adverse experiences, and dosage recommendations. It is summarized below.

Tofranil® Geigy
imipramine hydrochloride USP



il® imipramine hydrochloride USP

ndications: The concomitant use of this agent onoamine oxidase inhibiting (M.A.O.I.) com- s is contraindicated. Hyperpyretic crises or convulsive seizures may occur. Potentiation of e effects can be serious or even fatal. An interval ast 14 days after M.A.O.I. therapy has been tinued should be allowed before this drug may stituted. Initial dosage should be low, increases be gradual, and the patient's progress should fully observed. The drug is also contraindicated ing the acute recovery period after myocardial ion, (b) in patients with known hypersen- to the drug. Cross-sensitivity to other dibenz- e compounds should be kept in mind.

/arnings: *Usage in Pregnancy:* Safe use of mine during pregnancy and lactation has not stablished; therefore, in administering the drug gnant patients, nursing mothers, or women of earing potential, the potential benefits must be d against the possible hazards. Animal repro- n studies have yielded inconclusive results. have been clinical reports of congenital mal- ion associated with the use of this drug, but a relationship has not been confirmed.

xtreme caution should be used when this drug n to:

ents with cardiovascular disease because of the ibility of conduction defects, arrhythmias, cardial infarction, strokes and tachycardia;

ents with increased intraocular pressure, history inary retention, or history of narrow-angle coma because of the drug's anticholinergic erties;

erthyroid patients or those on thyroid medica- because of the possibility of cardiovascular city;

ents with a history of seizure disorder because drug has been shown to lower the seizure shold;

ents receiving guanethidine or similar agents imipramine may block the pharmacologic ts of these drugs.

sage in Children: Pending evaluation of results inical trials in children, the drug is not recom- d for use in patients under twelve years of age. nce the drug may impair the mental and/or physical abilities required for the performance of potentially hazardous tasks, such as operating an automobile or machinery, the patient should be cautioned accordingly.

Precautions: Because of the possibility of suicide in seriously depressed patients, careful supervision during the early phase of treatment is necessary and hospitalization may be required. Prescriptions should be written for the smallest amount feasible.

Hypomanic or manic episodes may occur, particularly in patients with cyclic disorders. Such reactions may necessitate discontinuation of the drug. If needed, imipramine may be resumed in lower dosage when these episodes are relieved. Administration of a tranquilizer may be useful in controlling such episodes.

Prior to elective surgery, imipramine should be discontinued for as long as the clinical situation will allow.

An activation of the psychosis may occasionally be observed in schizophrenic patients and may require reduction of dosage and the addition of a phenothiazine.

In occasional susceptible patients or in those receiving anticholinergic drugs (including antiparkinsonism agents) in addition, the atropine-like effects may become more pronounced (e.g. paralytic ileus). Close supervision and careful adjustment of dosage is required when this drug is administered concomitantly with anticholinergic or sympathomimetic drugs.

Patients should be warned that the concomitant use of alcoholic beverages may be associated with exaggerated effects.

Both elevation and lowering of blood sugar levels have been reported.

Concurrent administration of imipramine with electroshock therapy may increase the hazards; such treatment should be limited to those patients for whom it is essential.

Adverse Reactions: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke, falls.

Psychiatric: Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation; insomnia and nightmares; hypomania; exacerbation of psychosis.

Neurological: Numbness, tingling, paresthesias of extremities; incoordination, ataxia, tremors; peripheral neuropathy; extrapyramidal symptoms; seizures, alterations in EEG patterns; tinnitus.

Anticholinergic: Dry mouth, and, rarely, associated sublingual adenitis; blurred vision, disturbances of accommodation, mydriasis; constipation, paralytic ileus; urinary retention, delayed micturition, dilation of the urinary tract.

Allergic: Skin rash, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight); edema (general or of face and tongue), drug fever, cross-sensitivity with desipramine.

Hematologic: Bone marrow depression including agranulocytosis; eosinophilia; purpura; thrombocytopenia. Leukocyte and differential counts should be performed in any patient who develops fever and sore throat during therapy; the drug should be discontinued if there is evidence of pathological neutrophil depression.

Gastrointestinal: Nausea and vomiting, anorexia, epigastric distress, diarrhea; peculiar taste, stomatitis, abdominal cramps, black tongue.

Endocrine: Gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido, impotence; testicular swelling; elevation or depression of blood sugar levels.

Other: Jaundice (simulating obstructive); altered liver function; weight gain or loss; perspiration; flushing; urinary frequency; drowsiness, dizziness, weakness and fatigue; headache; parotid swelling; alopecia.

Withdrawal Symptoms: Though not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, headache and malaise.

How Supplied: Round tablets of 25 and 50 mg.; triangular tablets of 10 mg. for geriatric and adolescent use; and ampuls, each containing 25 mg. in 2 cc. for I.M. administration. (B)98-146-850-II (7/71)

For complete details, including dosage, please refer to the full prescribing information.

GEIGY Pharmaceuticals
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TO 8575



When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range: Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections. In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomycin hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in not less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic: Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone

infections caused by susceptible strains of pneumococci, streptococci, and staphylococci, including penicillin-resistant strains. Staphylococcal strains resistant to Lincocin (lincomycin hydrochloride, Upjohn) have been recovered. Before initiating therapy, culture and susceptibility studies should be performed. Lincocin has proved valuable in treating patients hypersensitive to penicillin or cephalosporins, since Lincocin does not share antigenicity with these compounds. However, hypersensitivity reactions have been reported, some of these in patients known to be sensitive to penicillin.

Well tolerated at infusion site: Lincocin intravenous infusions have not produced local irritation or phlebitis, when given as recommended. Lincocin is usually well tolerated in patients who are hypersensitive to other drugs. Nevertheless, Lincocin should be used cautiously in patients with asthma or significant allergies.

In patients with impaired renal function, the recommended dose of Lincocin should be reduced to 25—30% of the dose for patients with normal kidney function. Its safety in pregnant patients and in infants less than one month of age has not been established.

Lincocin may be used with other antimicrobial agents: Since Lincocin is stable over a wide pH range, it is suitable for incorporation in intravenous infusions; it also may be administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.



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Sterile Solution (300 mg. per ml.)

Lincocin®

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:	Lincomycin hydrochloride monohydrate equivalent to lincomycin base
250 mg Pediatric Capsule	250 mg
500 mg Capsule	500 mg
*Sterile Solution per 1 ml	300 mg
Syrup per 5 ml	250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: *CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS BEEN REPORTED FOLLOWING PARENTERAL THERAPY.* A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β-hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihistamines available for emergency treatment. *Skin and mucous membranes*—Skin rashes, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported particularly after too rapid IV administration. Rare instances of cardiopulmonary arrest have been reported after too rapid IV administration. If 4.0 grams or more administered IV, dilute in 500 ml of fluid and administer no faster than 100 ml per hour. *Special senses*—Tinnitus and vertigo have been reported occasionally. *Local reaction*—Excellent local tolerance demonstrated to intramuscularly administered Lincocin (lincomycin hydrochloride). Reports of pain following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: *250 mg* and *500 mg* Capsules—bottles of 24 and 100. *Sterile Solution, 300 mg per ml*—2 and 10 ml vials and 2 ml syringe. *Syrup, 250 mg per 5 ml*—60 ml and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

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Kalamazoo, Michigan 49001

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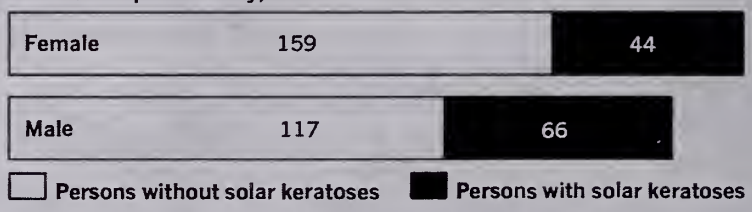
What it means to live and work in Tipton County, Tennessee

Persons who are white and over 40 have one chance in four of having solar keratoses... which may be premalignant

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

Prevalence of solar keratoses in white persons over 40 in Tipton County, Tennessee



*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction (only in affected areas)* usually occurs within two weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Cosmetic results

Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

5% cream–a Roche exclusive

Only Roche formulates the 5% cream... high in patient acceptability... high in clinical efficacy, especially for lesions of hands and forearms... economical.

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Multiple actinic or solar keratoses.
Contraindications: Patients with known hypersensitivity to any of its components.
Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.
Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.
Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.
Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.
How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.
Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

an alternative to conventional therapy

Efudex®
(fluorouracil)
cream/solution

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Nutley, N.J. 07110



Librium® and (chlordiazepoxide HCl) concomitant use

Librium (chlordiazepoxide HCl) is used as adjunctive antianxiety therapy concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, antihypertensive agents, diuretics, anticholinergics and antacids.

Antianxiety effectiveness: Demonstrated in a broad range of psychologic and physical dysfunctions; indicated when reassurance and counseling are not enough and until, in the physician's judgment, anxiety has been reduced to tolerable, appropriate levels.

Effect on mental acuity: Usually minimal on proper maintenance dosage.

Safety: An excellent clinical record. In general use, the most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated.

in relief of clinically significant anxiety

Librium®
(chlordiazepoxide HCl)

5-mg, 10-mg, 25-mg capsules up to 100 mg daily in severe anxiety

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

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